



OSPREY COMBAT AIRCRAFT • 93



# A-6 INTRUDER UNITS OF THE VIETNAM WAR

Rick Morgan







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# INTRODUCTION

Grumman's remarkable A-6 family of aircraft flew for more than four decades with the US Navy and Marine Corps. Never exported, the Intruder personified what was called 'Medium Attack' in the Naval services from the early 1960s through to the mid-1990s, and provided what was described as 'all-weather' strike capability over multiple wars, fracas and incidents. The A-6, and its derivatives, was a critically important strike aircraft that ranks as one of the true classics of US naval aviation.

The need for what became 'Medium Attack' dates from World War 2, where the US Navy deployed only a few carriers with air groups embarked that were specifically trained for night operations as the service worked to expand the conditions it could apply combat effects in. Following World War 2 the US Navy centred this capability in four composite (VC) night attack and fighter squadrons that supplied detachments (or 'teams') to its air groups. During the Korean War these small units typically flew three-seat AD-4N Skyraiders or single-seat F4U-5N Corsairs as night 'hecklers' where, although they remained a thorn in the side of the Communists throughout the war, they provided only limited effects due to their small numbers and lack of suitable targeting systems.

Through the 1950s the US Navy rapidly expanded night attack operations in its air groups and carriers. By 1956 the Douglas AD-5N Skyraider had become the primary airframe in this area, although the mission was still largely conducted by specialised detachments from Naval Air Station (NAS) North Island's All-Weather Attack Squadron VA(AW)-35 and VA(AW)-33 out of NAS Atlantic City, New Jersey. While the AD had some capability, the pilot still had to largely rely on visually sighting his targets, either in moonlight or under flares. What the US Navy needed was a weapons system that could penetrate deep into enemy territory at low altitude in darkness and in foul weather and strike its targets without outside visual reference. In spite of its popular use, the term 'all-weather' has always been somewhat overstated as there are certain extreme meteorological conditions in which no sane pilot will fly.

From 1956 the new 'Heavy Attack' community, with the wondrous Douglas A3D Skywarrior, was coming on line, which provided a realistic carrier-based atomic strike capability. The US Navy was also working on what would become 'Light Attack', with smaller jet aircraft like the F9F-8B, FJ-4B and A4D taking over the job the F4U Corsair had done during the Korean War. Yet in spite of these developments, the service still required another aircraft to fill the area between daylight/visual strike and nuclear Armageddon. This was the basis for what became 'Medium Attack'.

With this in mind, on 15 May 1957 the US Navy's Bureau of Aeronautics (BuAer) released the initial requirement OA-01504 to 13 companies for a new 'all-weather' attack aircraft. This design needed to fly long distances at high speeds with a heavy bomb load – specifically

The original Intruder design, the Grumman A2F-1, was still recognisable as the 'flying tadpole' of later years. This is airframe No 4, BuNo 147867, in an early publicity shot. The aircraft carries a maximum bomb load of 30 Mk 82 500-lb bombs, which would soon be reduced to 28. The forward/inside bombs on the inboard wing stations were removed due to potential interference with the forward main landing gear doors. By the time production of the A-6A commenced, the aircraft's rudder had been enlarged, a refuelling probe fitted, wingtip speed brakes installed and the moveable engine exhausts fixed in place (Grumman courtesy the Grumman Historical Center)



something larger than the modest amounts that the mid-1950s jets were carrying, which rarely exceeded 2000 lbs.

While five firms chose to 'no bid' the effort, eight responded, with Chance Vought, Douglas, Grumman, Martin, North American, Lockheed, Boeing and Bell submitting designs for what was now called 'VAX' within BuAer. On 24 December Grumman Aircraft was declared the winner, with the new design being designated A2F-1.

In a world flush with pointy-nose designs flaunting afterburning engines, the new A2F was certainly different and befitting of the legendary 'Grumman Iron Works' title. The design featured a pair of Pratt & Whitney J52 turbojet engines buried in the fuselage, and its odd shape – big in the front (for separate ground mapping and targeting radars) and tapered at the rear – led to the comment that 'If Grumman knows so much about building aircraft, why is it blunt in front and pointy at the back?' As wryly stated by one observer, it was obviously not built to clear the theoretical 50-ft obstacle at the end of the runway, but to fly *through* it.

Grumman's new A2F 'flying drumstick' rolled out of its Calverton, New York, factory on 29 April 1960 and was christened Intruder. On paper it had all of the features the US Navy wanted, being touted as able to carry lots of ordnance over long distances. It was equipped with a state-of-the-art array of two radars and Litton's highly touted ASQ-61 DIANE (Digital Integrated Attack Navigation Equipment) system, which would allow the crew of two to fly at very low altitudes in rough terrain at night and in most weather. In those terms it was groundbreaking. The US Air Force certainly had nothing like it.

By mid-1961 the US Navy had coined the term 'Medium Attack' in its official documents to describe the A2F's position in its aviation structure. This solidly placed the new type, and its personnel, between the existing jet attack types, who flew the A4D Skyhawk and FJ-4B Fury, and the formally established 'Heavy Attack' category, which operated the A3D Skywarrior.

While the A3D-equipped 'Heavies' proudly carried the officially recognised VAH designation, the medium and light Attackrons (attack squadrons) shared the VA title, with the terms 'VAM' and 'VAL' becoming informal ways to differentiate their roles – the US Navy did eventually formalise the 'Light Attack' designation as VAL for a single OV-10 Bronco unit that would serve in Vietnam. For the next 30 years these two groups were very much separate and distinct communities located at different bases with vastly different personalities. The 'Light Attack' guys flew in single-seat, single-engined aircraft, while being 'Medium Attack' meant two-seat, twin-engined 'All-Weather' strikers, with a 'mission-specialist' Naval Flight Officer (NFO) being equal to the pilot – something more than a few 'Single Anchor' VAL pilots had trouble accepting.

The addition of the second seat was critical, as no small part of the Intruder's eventual success was in fact due to its crew of two – a Naval Aviator and a Bombardier-Navigator (B/N), the latter being a commissioned officer who was initially rated as a Naval Air Observer (NAO).

The concept of the NAO went back to observers in World War 1-era aircraft, and it had developed over time to include navigators and gunners, many of which were enlisted men or warrant officers, particularly



in the Marine Corps. The advent of jet aircraft and complex 'weapons systems' led to training commissioned officers as B/Ns, initially in the heavy attack community. Within the carrier US Navy in the early 1960s the introduction of the F-4, A-5, A-6 and E-2 all led to a rapid increase in the population of NAOs.

The NAO designation became Naval Flight Officer (NFO) on 1 May 1965. Five years later NFOs became eligible for command, something that had been reserved for pilots in aviation units up to then (as famously stated in reference

to the 'Blackshoe Navy', 'the guy driving the boat isn't necessarily the man in charge'). In this regard the US Navy, much to its credit, established precedence well ahead of its USAF brethren, as it recognised that talent did not depend on who held the controls. For the A-6, the aircraft's side-by-side seating arrangement significantly improved crew coordination which, with appropriate training, usually led to a close-knit team that could better share the intense cockpit workload the mission generated. This was the role the Intruder was designed for, and it eventually found its niche in Southeast Asia.

To form its new Medium Attack community in the early-to-mid 1960s, the US Navy called on the existing 'propeller attack' force. As of January 1963, there were 15 Carrier Air Groups (CVGs) in existence, each of which had three attack squadrons assigned. Two of these were 'jet attack' (soon redesignated as 'Light Attack') units flying either the Douglas A-4 Skyhawk or the North American FJ-4B *Fury*. The third VA unit was considered 'prop attack', equipped with Douglas A-1 Skyraiders.

Notwithstanding its future heroics in the Vietnam War (see *Osprey Combat Aircraft 77 - US Navy A-1 Skyraider Units of the Vietnam War*), the piston-engined A-1 was already considered obsolescent by many within Naval Aviation and due for replacement. Over the next five years the US Navy would retire its Skyraider attack force, with ten of these squadrons re-equipping with the new Intruder. By the end of the war the service would have 12 A-6 units. All but two of these, both Virginia-based, would participate in combat in Southeast Asia.

During the same period the Marine Corps transitioned six attack (VMA) squadrons from Skyhawks to Intruders, being re-designated as Marine All Weather Attack (VMA(AW)) in the process. Four of these would serve in Vietnam, allowing the service to perform both 'all weather' close air support (CAS) for the 'grunts in the field' and deep strike missions throughout Indochina. The Marine Corps also went a step further by developing and deploying the most capable electronic warfare aircraft of the Vietnam War in the form of the EA-6A, with two of its three Marine Composite Reconnaissance Squadrons (VMCJs) seeing combat in Southeast Asia.



**The Intruder Naval Aviator/Naval Flight Officer team in their 'office'. Ltjg Frank Marlow and Ltjg Fred Hewitt sit in the cockpit of a VA-85 A-6A prior to launching from USS *Kitty Hawk* (CVA-63) during the 1966 deployment. They represent the few men who 'knew the power' of the Intruder and flew it in combat over Vietnam. In their case, both men would successfully complete what would be a very difficult deployment for the 'Black Falcons'. The man whose name is on the canopy rail, Lt(jg) Dale Kinzel, would reportedly survive the cruise too, only to die a short while later in an automobile accident (US Navy)**

This is the genesis of Medium Attack, which cut its teeth and became the stuff of legends, in Vietnam.

## **AUTHOR'S NOTES AND ACKNOWLEDGEMENTS**

After writing an almost 300-page and five-pound operational history of the Intruder more than a decade ago, I found trying to keep this work within its required word count to be quite an effort, although certainly a challenge. Brevity has required me to relate only one mission in detail per chapter, each of which, I hope, captures the unique abilities of the Intruder and its crewmen. Although combat in Southeast Asia actually spanned several decades, I've chosen to focus this work from the Gulf of Tonkin incident through Operation *End Sweep* (2 August 1964 to 27 July 1973). As for the A-6's remarkable career beyond that point, further editions of the Osprey series will cover the balance of the aircraft's frontline service.

First, a couple of notes on writing style. I've been told I use a lot of technical language, which is undoubtedly true with my background. I can only apologise in advance for this. Aircraft are referred to by their side numbers, usually with their modex (tail code) or call sign as a prefix. This is how Naval Aviators refer to their aircraft – 'NH 505' or 'Buckeye 505' for a VA-85 aircraft in 1966 for instance.

As for the book's contents, squadron accomplishments can be dry. Sorties, tonnage and other statistics frequently do not adequately cover what really happened, reflecting the true effort and sacrifices made by the men who accomplished the mission. What I've tried to do here is highlight both the history of the aircraft and the squadrons that flew it, as well as the men lost while participating in a largely misunderstood and unpopular war. Needless to say, space does not permit me to really cover each man to the level they deserve, nor deal with their families left at home who, in many instances, only knew that their loved ones were listed as Missing in Action (MIA), with no real idea of what happened to their husbands, sons, fathers or brothers.

The nature of the A-6, and its mission – low altitude in foul conditions, and often solo – all too frequently led to what was described as an 'A-6 peculiar loss', where no other American could really know what happened. Many of these men ended up on Missing In Action lists for years. In some cases they walked out of Prisoner of War (PoW) camps in 1973. However, more often, they would eventually be given a presumptive declaration of Killed in Action (KIA). Over the years the remains of some of these souls would be found by US and Vietnamese teams and returned home. Many remain unaccounted for in Vietnam.

It is to these men that this book is dedicated.

I wish to acknowledge the support of the following individuals during the writing of this volume – Rear Adm Lyle Bull USN (Ret), Lt Cdr Rick Burgess USN (Ret), Col Charlie Carr USMC (Ret), Capt Rich Dann USNR (Ret), Cdr Dave Everett USN (Ret), Rear Adm Rupe Owens USN (Ret), Lt Col Ted Herman USMC (Ret), Rear Adm Grady Jackson USN (Ret), PHCS Bob Lawson USN (Ret), Capt John McMahon USN (Ret), Cdr Peter Mersky USNR (Ret), Rear Adm Jim Seely USN (Ret), Cdr Doug Siegfried USN (Ret), Col Wayne Whitten USMC (Ret), Capt Dave Williams USN (Ret), Tony Holmes, René J Francillon, Frank McBaine, Lon Nordeen, Angelo Romano and Jim Rotrammel.



# UNDERWAY

The American air war in Vietnam started slowly and indistinctly, and included years of small-scale, semi-covert operations over Laos and other parts of Southeast Asia in the late 1950s and early 1960s. Although largely unknown to the public, America's military presence in the region became international news on 2 August 1964 when the aircraft carrier USS *Ticonderoga* (CVA-14) provided support for the destroyer USS *Maddox* (DD-731) in what would quickly become known as the Gulf of Tonkin incident.

For the next nine years American forces conducted a continuous air war in Vietnam, with early operations like *Flaming Dart* rapidly escalating into *Rolling Thunder*, which involved strikes into North Vietnam from March 1965 through to October 1968. For US Navy attack units undertaking these missions, the A-4 Skyhawk and propeller-driven A-1 Skyraider were the initial workhorses for the fleet, along with a small number of A-3 Skywarriors.

On 5 June 1965 the tenth aircraft carrier to chop to the US Navy's operational lead, Commander Carrier Task Force 77 (CTF-77), reported in-theatre with a new and highly anticipated attack aircraft, the Grumman A-6 Intruder. With its arrival, Medium Attack had entered the war. Over the next eight years US Navy and Marine Corps medium attack units were among the most heavily involved communities of all within Naval Aviation, with ten squadrons making 34 deployments in ten aircraft carriers. During the same period four Marine Corps units would spend 116 months in-theatre at three different locations, as well as making one carrier deployment.

Their record, achievements and sacrifices were notable.

In terms of impact, the A-6 offered a unique combination of capabilities that were not available in any other US Navy or USAF platform in 1965. Aircraft like the A-1, early versions of the A-4,



Before you can deploy you need a functioning training organisation, and Oceana's VA-42 got that job, receiving its first Intruders in February 1963 and graduating VA-75, VA-85, VA-65 and VMA(AW)-242, in that order, in rapid fashion. The 'Green Pawns' remained as the east coast A-6 RAG until its disestablishment in September 1994. This photograph shows four very early VA-42 Intruders in flight, circa 1964, all still equipped with the initial wingtip-mounted pitot tube that would soon be moved to the tail. These BuNo 1499xx-series aircraft are very early Intruders, being among the first 35 built. At least two of these, AD 503 and AD 504, would be lost in mishaps. AD 501 (BuNo 149977) would later become a prototype EA-6A, while AD 502 (BuNo 149479) would eventually be modified into the first EA-6B prototype (US Navy)



As the first Intruder squadron, VA-75 received a lot of photographic attention from both the US Navy and Grumman. Among the most widely distributed photo shoots was a division of six 'Sunday Puncher' A-6As that were shot in a variety of formations, and with each aircraft carrying a different ordnance load. This shot from that event, circa 1965, shows four aircraft, with loads including Bullpup missiles (AG 500, with very subtle CAG-7 markings as well), five-inch Zuni rockets (AG 501), 2.75-inch rockets (AG 504) and Mk 82 bombs (AG 507). These early BuNo 1499XX series aircraft were all replaced by newer BuNo 1515XX series jets prior to VA-75's first deployment (US Navy courtesy the Grumman Historical Center)



F-100 and B-57 were visual bombers only, being highly susceptible to the vagaries of weather. The F-105 and later A-4s had radars, but pilots generally did not use them for weapons delivery. The A-3 was capable of radar bombing, but highly vulnerable. The one true heavyweight in-theatre, the Boeing B-52, had an excellent radar-bombing system and immense load, but would not be allowed to attack targets 'Up North' until late in the conflict.

The new A-6 entered the theatre with highly anticipated 'all-weather' radar and system bombing capability, as well as a weapons load second only to the Stratofortress. Simply put, the USAF would not really have anything like the Intruder until the star-struck introduction of the F-111A in 1968. Needless to say, great things were expected of the new aircraft.

## INITIAL INTRUSIONS

About ten miles east of the huge US Navy base at Norfolk, Virginia, is NAS Oceana, located near Virginia Beach. It was the initial home for the new A-6 Intruder, with the 'Green Pawns' of VA-42 getting the first of the type as the Fleet Readiness Squadron (and still known US Navy-wide as the RAG from the obsolete term Replacement Air Group). Although the rapidly growing war in Indochina would be conducted by the Pacific Fleet, the first four Intruder units in combat would come from elements of the Atlantic Fleet.

The first fleet squadron would be VA-75 'Sunday Punchers' under Cdr 'Swoose' Snead, which traded in its A-1H Skyraiders and reported to VA-42 for training in mid-1963 – the unit received its first Intruders on 14 November.

With the end of training the 'Punchers' re-joined Carrier Air Wing Seven (CVW-7) and the Norfolk-based USS *Independence* (CV-62) and prepared for their first deployment in their new steed. The air wing was made up of what could be called a 'typical' mid-1960s configuration for a 'big-deck' carrier, with a pair of F-4B Phantom II units and two light attack squadrons with A-4E Skyhawks, a 'Heavy Recon' unit with RA-5Cs and detachments of A-3B and E-1B aircraft.

Atkron-75 departed Norfolk on 10 May 1965 with 12 A-6As in an air wing that numbered 80 aircraft. 'Indy' in-chopped to Seventh Fleet on 5 June, where it relieved the homeward bound USS *Enterprise* (CVAN-65). Combat flights began on the 27th, with strikes being launched from *Dixie Station*, the carrier operations area in the South China Sea off South Vietnam. Work 'up north' from *Yankee Station*, the northern counterpart located deep in the Gulf of Tonkin, began on 3 July. This routine of 'breaking in' down south before entering the 'big leagues' up north had



A 'Sunday Puncher' A-6A seconds before being shot from *Independence's* Cat No 4. Although the yellow shirt is touching the deck, the pilot appears to be in the middle of his control 'wipe-out'. This photograph was taken on 2 March 1965, while the ship and air wing were conducting work-ups in the Caribbean. Roughly two months later they would depart Norfolk on their introductory war cruise. This aircraft, BuNo 151583, was the 70th production Intruder built, and it would be retired as an A-6E in 1991 (US Navy)

already become the normal pattern for almost all carriers that worked Vietnam as they contributed to Operation *Rolling Thunder*, the bombing campaign against North Vietnam that had officially begun only two months earlier.

Operations over North Vietnam and into Laos began in earnest, and on 14 July the first Intruder was lost while flying a *Barrel Roll* mission over Laos. Lts Don Boecker and Don Eaton were forced to leave their aircraft, 'Flying Ace 507' (BuNo 151584), after a Mk 82 bomb detonated under the starboard wing right after its release. The crew was rescued by Air America helicopters following a night and the better part of a morning avoiding capture in the mountains.

Four days later another 'Puncher' crew was forced to eject from their aircraft, AG 500 (BuNo 151577), when Cdr Jeremiah Denton and Lt(jg) Bill Tschudy suffered the same premature detonation issue, this time near Thanh Hoa, in North Vietnam. Both men became PoWs, and would be the first of many Intruder crew to remain as 'guests' of the North Vietnamese through to 1973. A remarkable man, Alabama-native Denton would earn the Navy Cross for his leadership in prison camp. He would retire from the US Navy as a rear admiral in 1977, write the book *When Hell Was in Session* on his experiences in North Vietnam and be elected to the US Senate in 1980.

Yet again, on 24 July, another Intruder fell from the sky as AG 511 (BuNo 151585) suffered what was believed to be another premature bomb detonation. The crew, Lt Cdr 'Deke' Bordone and Lt(jg) Pete Moffett, were on their third pass over a target in southern Laos during a *Steel Tiger* mission when their aeroplane was severely damaged by a blast under its wing. Both survived and were soon back on 'Indy'. Something obviously had to be done to correct the issue, and improved fuses and modified ejector racks were quickly obtained. These changes seemed to do the trick, and VA-75 continued about its business.

Two months later, on 17 September, another VA-75 aircraft (BuNo 151588) was lost, this time as 'Puncher' Skipper Fred Vogt (who had only recently relieved Snead as squadron CO) and B/N Lt Robert Barber were targeting torpedo boats near Bach Long Island at night. Working under flares, the CO's aircraft hit the water at some point and

both crew were killed. It would prove to be the final Intruder loss on the type's first deployment.

Following what one squadron member described as an 'uneventful' final line period, 'Indy' departed the waters off Vietnam for its long trip home on 21 November 1965, the vessel's spot on the line being taken by the San Diego-based USS *Kitty Hawk* (CVA-63). The 'Hawks' CVW-11 brought with it the second Intruder unit to deploy, the 'Black Falcons' of VA-85. The 'Buckeyes', as they were also known, had traded in their A-1s in 1964 and followed VA-75 through the RAG. This would be their first A-6 deployment, as well as the first one for a Commander, Naval Air Forces, Pacific (AIRPAC) carrier and air wing. It would also be the only deployment of the war where an Intruder unit was teamed with a complete squadron of A-1 Skyraiders (the 'Arabs' of VA-115) and a single light-attack Skyhawk unit (VA-113, equipped with A-4Cs).

The 'Black Falcons' got off to a hard start with their new mounts while training when two of their Intruders were involved in a mid-air collision off California on 27 July 1965, with the loss of both airframes and B/N Al Malinkoff. Although the 'Buckeyes' could not have known it upon their 15 November arrival off Vietnam, VA-85's first deployment would actually prove more costly than their predecessor's. On the night of 21 December 'Buckeye' 801 (BuNo 151781) was lost during a night strike north of Haiphong, resulting in the deaths of squadron CO Cdr Billie Jack Cartwright and his B/N Lt Ed Gold. Although there was reported SAM activity, the actual cause of the A-6's demise was regarded as unknown.

Almost two months later, on 18 February 1966, NH 812 (BuNo 151797) flew into the ground beyond a group of trucks while conducting day armed reconnaissance west of Hanoi. Once again, the cause was unknown, although target fixation and late pull-up off a bombing run in mountainous terrain may have been a factor. Lt(jg)s Joe Murray and Tom Schroeffel were both killed. The next 'Black Falcon' lost was on 17 April, when Lt Cdrs Sam Sayers and Charles Hawkins were hit by AAA while flying NH 814 (BuNo 151794) off the North Vietnamese coast in the vicinity of Vinh. Fire and hydraulic failure led to ejection, and in this case both aircrew were recovered by USAF search and rescue (SAR) forces.

The following day the squadron conducted a night strike against the Uong Bi powerplant, located some 12 miles north of Haiphong. Only three aircraft were involved – two Intruders and a sole E-2A from VAW-11 Det C for communications. *Kitty Hawk* commenced launching aircraft in radio silence at 0100 hrs, undoubtedly in deference to the Soviet intelligence ships that normally shadowed the Seventh Fleet. Squadron XO Cdr Ron Hays, with B/N Lt Ted Been and their wingmen, Lt Bud Roemish and Lt Cdr Bill Yarbrough, rendezvoused and flew 'feet dry' at an altitude of 500 ft or less until 25 miles from the target, where they started a slow climb to a safe bomb-release altitude of 1800 ft. The two took lateral separation and lead dropped 13 Mk 83 1000-lb bombs using full-system delivery, while 'Dash-2', with system problems, expended the same load manually.

The Vietnamese were caught flat-footed, and responded with AAA only after the Intruders had turned for home. Post-strike bomb damage assessment (BDA) showed heavy damage, with at least 25 bomb craters





visible within the target area. The enemy must have been impressed, as the following day they issued a shrill press release denouncing what appeared to be 'a major escalation by the Yankees through the introduction of the B-52 Stratofortress into the North'.

The 'Black Falcons' were not able to rest on their laurels, however, as they would lose two more aircraft and their crews within days. Cdr Jack Keller had taken command of the squadron following the loss of Skipper Cartwright four months earlier. On the night of 21 April he and his B/N, Lt Cdr Ellis Austin, were flying 'Buckeye 805' (BuNo 151798) on a night strike near Vinh. Their wingman, who was unable to proceed with his bombing run due to aircraft problems, saw a flash of light that was probably his CO's aircraft hitting the ground near the target. Both crew were killed, making Keller the second VA-85 CO lost on this deployment. Cdr Hays immediately assumed command.

The following day yet another VA-85 Intruder was lost when Lt Cdr Bob Weimorts and Lt(jg) Bill Nickerson apparently flew their aircraft (BuNo 151785) into the water off Vinh while conducting an *Iron Hand* anti-SAM mission. Yet again, both crew were lost.

In spite of this intense toll, VA-85 continued operations. And while there was no lack of heroes amongst the aircrew of CVW-11 on this cruise, the US Navy would reward the bravery of just one 'Black Falcon' with the first major award for the Medium Attack community during this deployment. On 27 April 1966, A-6A NH 811 (BuNo 151788) was targeting barges north of Vinh when it was hit by a small-calibre bullet that struck the pilot, Lt Bill Westerman, leaving him with serious wounds. B/N Lt(jg) Brian Westin immediately reached across the cockpit to take

VA-85 was the second fleet Intruder squadron, commencing its transition from A-1s in March 1964. This familiar photograph, probably taken in 1965, is not often reproduced in colour as seen here. It shows how the 'Black Falcons' marked their first A-6As for their initial assignment with CVW-6 embarked in *Enterprise*. AE 400 carries a 'Battle E' on the empennage as well as the correct insignia orange markings for a 400-series squadron, in this case with six tiny falcons in white on the rudder. This image, with a pilot in a pre-war orange flight suit flying over a peaceful Virginia countryside, would soon change for VA-85 as it entered combat with CVW-11. BuNo 151780 would be lost with VA-85, but not until 1972 after it had been converted into a KA-6D (US Navy via Angelo Romano)

*Kitty Hawk* steaming off Hawaii in November 1965 while transiting to its first war cruise with CTF-77 in 1965. CVW-11 is arrayed on deck, with three VA-85 A-6As sitting on the port bow. Other squadrons visible include VA-115 (A-1H), VA-113 (A-4C), VF-114 (F-4B), VF-213 (F-4B/G), RVAH-13 (RA-5C), VAH-4 Det C (A-3B) and VAW-11 Det C, which was debuting the E-2A. Later on in the cruise the air wing was involved in camouflage paint trials (US Navy via Rick Burgess)





**'Buckeye 802' stretches the wire after it has trapped on *Kitty Hawk* in 1965 with its wingtip speed brakes almost retracted. The fuselage speed brake boards were normally de-selected for carrier operations due to the thrust loss they induced when extended. They would eventually be completely de-activated and pinned shut. A-6A BuNo 151782 would be one of the last Intruders to be retired, as an A-6E in 1995 (US Navy)**

**'Buckeye 806' descends over the ramp with its hook down and speed brakes fully extended. The jet's load is three empty MERs and a pair of external fuel tanks. The huge black nose quickly became a trademark for the type, and, reportedly, made it easier for AAA gunners to track, which led to its replacement by lighter shades from 1968. This aircraft would receive camouflage paint and be shot down by AAA on a night mission on 21 April 1966 (US Navy)**



the control column and point the aircraft out to sea. With landing completely out of the question and the pilot lapsing in and out of consciousness, Westin jettisoned the canopy and reached over and pulled Westerman's ejection handle, and then his own.

With both men in the water, SAR forces quickly arrived, and an HH-2 Seasprite was soon overhead the B/N and quickly hoisted him aboard. Westin then directed the

helicopter down the aircraft's track until they spotted the pilot floating in the water. The HH-2 did not have a swimmer aboard, and since it was obvious that Westerman would need help getting into a rescue sling, Westin did not hesitate and jumped back into the Tonkin Gulf himself. He subsequently hooked up his pilot and waved the helicopter away to take the wounded aviator for medical help. Westin would be in the water for another five minutes before a second helicopter arrived to pull him out again. Brian Westin would subsequently be awarded the Navy Cross for his actions – the first of 14 Intruder crew to gain the US Navy's highest decoration during the Vietnam War.

Another VA-85 aircraft would be lost in an operational mishap on 15 May, when a returning A-6A (BuNo 151800) suffered a fuel transfer problem that led to fuel starvation. Both crew were recovered.

*Kitty Hawk* turned its bow back towards home on 23 May and arrived in San Diego on 13 June after almost eight months away from California, six of which had been on the line in Vietnam. To say it had been a hard deployment would be an understatement as CVW-11 lost no fewer than 25 aircraft, 20 of which were due to enemy action. For the 'Black Falcons', in spite of some tremendous accomplishments, it had come at a substantial cost – seven Intruders lost, along with eight pilots and B/Ns.

## AN EARLY CROSSROADS

After the first two cruises had brought mixed results and high losses, the Intruder, and the concept of medium attack, began to come under scrutiny and questions started to be asked as to the real value of the A-6 aircraft. In the positive, the jet had indeed proved itself to be capable of carrying a lot of ordnance long distances, with between 18 and 28 Mk 82 500-lb bombs being typical. This compared favourably to the six to eight normally carried by 'light attack' Skyhawks or the six bombs US Navy Phantom IIs typically lugged in the strike role.

The Intruder had also shown enormous capability in several spectacular missions, and the aircraft's fuel capacity gave it the ability to loiter near a target area far longer than most other jets. Indeed,

Forward Air Controllers (FACs) in the south raved about the new US Navy jet that carried a lot of bombs and had enough gas to make multiple passes before having to return to base or look for a tanker.

The A-6's complex targeting system, when it functioned correctly, allowed weapons delivery either manually (visual or radar) or via a fully automated system. During the latter method the B/N designated the target by radar and the system computed and released the bombs, with the pilot's release authority by means of the 'pickle'

button, in order to hit the target. This technique would allow, as the plan went, a single Intruder to deliver up to 28 500-lb bombs on a single pass while running at 480 knots or higher, even if the crew could not see the target due to poor weather or darkness.

In theory it was a brilliant system, except that the realities of continuous operations, new equipment and the strain of carrier operations led to less-than-acceptable readiness rates. Data showed that DIANE suffered a low operational rate, with maintainers and Grumman technical representatives spending many hours in the hangar bay working on aircraft to keep them in a full 'up' status. Even with their intensive care, serviceability rates initially ran at a disheartening 30-35 per cent.

The truth was that, even if called 'digital', the state-of-the-art DIANE was actually much more of an analog system, with gears and linkages making up most of its computer 'guts'. The mechanical parts could stick or stop working, leading to the common B/N 'emergency' procedure of kicking the side of the control pedestal to try to get the components to start moving again. Time and again, the ability of an experienced A-6 crew to hit their target with a marginal or degraded system continued to be one of the community's strong points.

What was most obvious was that the A-6's complex weapon delivery system required special care to achieve its advertised level of capability, and that when sortie count and total bomb tonnage was what mattered to leadership, too many aeroplanes were being launched in daylight with degraded systems when the squadron maintainers should have been allowed to groom them for night use. The other issue was that the carriers themselves, with only one flightdeck crew, found it difficult to run small, intermittent numbers of Intruders through the night after



**A VA-85 A-6A taxis towards *Kitty Hawk*'s bow cats during the 1965-66 war cruise. The aircraft carries what became the archetypical load for the type – MERs full of Mk 82 500-lb bombs, these examples being fitted with Snakeye retarding fins (US Navy)**

**VA-85 A-6A NH 805 sitting on *Kitty Hawk*'s Elevator No 1 in 1965. The aircraft and fuel tank wear full markings, which is an aesthetic luxury that combat operations, and losses, would soon make impractical. The jet carries the name of Lt(jg) Brian Westin on the canopy rail – he would be the first Intruder crewman to be awarded the Navy Cross during the Vietnam War. BuNo 151785 was subsequently lost with its crew during deployment on 22 April 1966, the jet having fallen victim to AAA (US Navy courtesy of the Grumman Historical Center)**







**Another 'Black Falcon' on *Kitty Hawk's* flightdeck being prepared for launch prior to the arrival of its crew. The bomb load appears to be a dozen Mk 82s, with what seems to be an empty MER on the centerline. NH 810 carries almost 70 mission markings, and shows signs of aggressive corrosion control. Transferred to VMA(AW)-225, BuNo 151803 would catch fire while hot refuelling at Cherry Point in May 1967 (US Navy courtesy of the Grumman Historical Center)**

**NH 805 on *Kitty Hawk's* Cat No 1 just prior to launch on a combat mission. The engines are at full power, as indicated by the small tornado of steam swirling into the intakes. The green shirt will push the launch button once signalled to do so by the catapult officer. The jet's load appears to be 18 M64 500-lb bombs fitted with conical fins (US Navy courtesy of the Grumman Historical Center)**



15, or more, hours of cyclic flight operations with the rest of the wing.

Equally troubling were reports of problems with the way the aircraft was tasked by higher authority, with the Intruder frequently not being used in its advertised 'all-weather attack' role, but as what was described as a 'very large and expensive A-4'. The contention was that the aircraft should have been playing to its strengths and flying dedicated, small-scale night raids

against high value targets, and not joining mass gaggle attacks in daylight. As described by one veteran B/N, the A-6 was not initially as accurate as an A-4 or even F-4 as a dive-bomber, particularly when most of the pre-deployment training for crews had emphasised system release and not visual drops through a bombsite. Although this delivery method would quickly improve with experience, the negative results could be dramatic, and as one senior B/N stated, 'When you miss the target with 28 bombs, people tend to notice'.

At the same time, it was probably not surprising that some at the US Navy's higher levels began to question the whole validity of the Intruder and the concept of Medium Attack. The discussion typically went that carrier aviation would be better served by buying large numbers of cheap, single-seat attack aircraft like the A-4 instead of the bigger, more expensive A-6.

With these issues in mind, and the future of the platform honestly in the balance, the third Intruder squadron arrived on the line in the form of the 'Tigers' of VA-65, sailing with CVW-15 in USS *Constellation* (CVA-64). The 'Tigers', who were also known by their somewhat offbeat official radio call-sign of 'Cupcake', were another Oceana-based outfit with an A-1 background. Like VA-85, the 'Tigers' were assigned to a west coast team, *Constellation* and CVW-15, in which they joined two A-4 light-attack squadrons. 'Connie' departed North Island for its second trip

to Southeast Asia on 12 May 1966. While fully acknowledging the valiant and ground-breaking efforts by VA-75 and VA-85, it would be the 'Tigers' successful deployment that put to rest many of the concerns about the Intruder, and set the path for the A-6's future successful operations in Vietnam.

One of the keys for the trip was the focus the ship (and specifically carrier CO Capt Bill Houser) and the air wing put on making the Intruder a success. 'Tiger' leadership included Cdr Bill Small, who was relieved by Bob Mandeville (the



first pilot to reach 1000 hours in the A-6) mid-cruise. Among the Junior Officers was Lt 'Rupe' Owens, a future squadron commander and admiral. He was typical of many young Intruder pilots, having been an A-4 pilot who recognised that the A-6 represented an important new type for the US Navy. He requested a lateral transfer to the new community and never looked back.

*Constellation* did its part to help the 'Tigers', with the unit being given priority on elevator runs to the hangar bay. This in turn allowed sailors to 'groom' aircraft and systems. Planners were allowed to pick targets that lent themselves to night attack and A-6 delivery. Finally, the ship scheduled single and paired Intruders late into the night outside normal cyclic operations schedules.

Drawing on the experience of the first two squadrons the 'Tigers' aircraft had new radar warning equipment installed that alerted them against the SA-2 in particular. Supply channels, which were only now coming out of a peacetime footing, were re-organised to better support the aircraft and the critical components that proved to have a higher failure rate than originally expected.

The results were impressive. With USAF, US Navy and Marine Corps strike aircraft routinely working over truck traffic along the trails, the North Vietnamese had become adept at hiding their presence during daylight hours and then moving under the cover of darkness – they knew that aircraft such as the A-4 and F-105 needed flares to illuminate targets at night. The Moving Target Indicator (MTI) in the A-6's system, in particular, proved to be a nasty shock as whole strings of vehicles travelling on the road at night could now be destroyed with practically no warning.

Daylight strikes continued as well, along with the new concept of the Alpha Strike, where the better portion of an air wing would all hit the same target at nearly the same time to reduce exposure to enemy air defences. At night, attempts to use 'bomber streams' where multiple A-6s followed each other over a single target proved to be hazardous to the later aircraft, so they developed the 'coordinated attack', where jets from the flight would come in from multiple headings within seconds of each other, using altitude offsets and precise timing for deconfliction. To some the tactic appeared to be emulating the *Blue Angels*, with multiple Intruders appearing suddenly very low over a target from different points of the compass, this time dropping bombs instead of trailing smoke and making lots of jet noise.

On 10 August the 'Tigers' demonstrated the concept by destroying a target north of Haiphong, with a section of aircraft dropping two Mk 84 2000-lb bombs each and the other pair contributing 28 Mk 82 500 pounders. Post-strike daylight reconnaissance showed what was described as 'a pile of rubble', all without loss.



**The crew of NL 407 talk prior to manning up for a mission from *Constellation*. The load today is 28 Mk 82 Snakeyes (US Navy)**

VA-65 was the third US Navy Intruder unit to join combat. Here, 'Cupcake 403' sits on 'Connie's' flightdeck, its Mk 82s proudly chalked by a squadron ordie 'armed by D A Smith, 7/29/66', which would be during the ship's third line period of that cruise. NL 403 was BuNo 151823, which would end up as a KA-6D. It was eventually retired in 1993 (US Navy courtesy of the Grumman Historical Center)



With the arrival of the winter monsoons the 'Tigers' carried the majority of the strike load for CVW-15, once again proving that the aircraft could do the job it was designed for WHEN maintained properly and given targets suitable for its unique characteristics. When all was said and done, VA-65 had dropped more than ten million pounds of bombs in 1239 sorties, with zero losses at night. While the air wing lost 15 aircraft during the cruise, only two were Intruders. The first (NL 406 BuNo 151816) fell to AAA during a daylight attack on the Hoi Thoung barracks near Vinh (Lt Richard Weber was recovered but B/N Lt(jg) Charles Marik was KIA) on 25 June. The second aircraft (NL 402 BuNo 151822), lost on 27 August, also fell to AAA in daylight near Vinh, Lt Cdr Jack Fellows and his B/N Lt(jg) George Coker being captured.

One of the more notable aspects of the deployments of both VA-85 and VA-65 involved the trials of camouflage paint on aircraft in both CVW-11 and CVW-15. Early in the war concerns had been raised that the US Navy's standard light gull grey and white paint scheme made aircraft highly visible in a tactical environment. After a flurry of paper on the subject and at least one test aircraft being painted by VA-42 in Oceana, AirPac authorised CVW-11 and CVW-15 to paint up to half of their aircraft in camouflage schemes using various shades of green, tan and blue. Paint application appears to have been done by the depot at North Island and by contractor NIPI in Japan, and covered all types in both wings. The results were truly unique as no two aircraft appear to have been identical. Indeed, detailed official documentation as to which aircraft received what specific pattern has yet to come to light.

Operationally, although the darker colours certainly degraded air-to-air detection when the enemy was above, it also raised safety questions in that camouflaged aircraft were harder to see on the flightdeck at night. The new schemes did not seem to be particularly useful against ground fire either, as they appeared to actually enhance the ability of AAA gunners when it came to tracking darker targets against a bright sky – it should be noted that both of VA-65's losses on deployment involved camouflaged aircraft downed by AAA in daylight. On top of that, there were pithy

comments from some quarters stating that the paint 'makes our aircraft look too much like the Air Force'. The issue was settled, although some niche types, including RA-3Bs and SAR helicopters, would continue to use non-standard colours. No other US Navy air wings would go to war in Southeast Asia with aircraft in anything other than grey and white.

On 17 November *Kitty Hawk* joined CTF-77 for its second combat deployment, yet again with CVW-11 and the 'Black Falcons' embarked. Turnaround had been less than five months, and the A-1s were gone this time, with two new



Lemoore-based light attack squadrons (VA-112 and VA-144) being assigned as stablemates.

The 'Falcons' excelled in spite of new wrinkles from the enemy, including radar-directed searchlights and rapidly evolving counter-Shrike missile tactics. VA-85's second Intruder deployment saw the unit spend 118 days on the line, and again the air wing took serious losses – this time it had 17 aircraft destroyed, including three Intruders. The first A-6 loss occurred on 19 January 1967 when NH 510 (BuNo 151590), flown by 'Black Falcon' XO Cdr Al Brady and his B/N Lt Cdr Bill Yarbrough (of the Uong Bi strike on the previous cruise), was hit by AAA while attacking a bridge in daylight. Both crew ejected, and although Brady became a PoW, Yarbrough, a highly regarded former enlisted man and A3D B/N, was killed when his parachute failed to deploy properly.

NH 511 (BuNo 151587) was lost on the night of 24 March during a four-ship strike on a powerplant near Kep. Although no one knows exactly what happened to the aircraft, Lt Cdr John Ellison and Lt(jg) Jim Plowman were both regarded as MIA – a status that was later changed to killed. Exactly a month later, on 24 April, the 'Black Falcons' lost their third aircraft, during a day Alpha Strike against the MiG base at Kep. The fight that ensued was one for the history books, and included air-to-air kills by both sides. 'Buckeye 512' (BuNo 151589) was making its run on the target when it was hit by 85 mm AAA. The Intruder quickly turned into a ball of fire, and both officers, Lt(jg)s Lou Williams and Mike Christian, ejected and became PoWs.

The 'Falcons' second deployment ended in late June, when they returned home to Oceana after seven months away. They would return to Southeast Asia skies in April 1968.

December 1967 had seen the arrival of the fourth Oceana-based Intruder squadron in-theatre as the 'Black Panthers' of VA-35 reported for duty as a member of CVW-9 embarked in *Enterprise*. The 'Panthers' (call-sign 'Ray Gun'), having also converted from A-1s, functionally replaced two of the four A-4C squadrons that had accompanied the ship and air wing on their first combat deployment the previous year.

The US Navy conducted a combat evaluation of camouflage paint on its aircraft in 1966, with a number of machines from CVW-11 in *Kitty Hawk* and CVW-15 in *Constellation* participating. The experiment was considered largely unsuccessful. VA-65's NL 402 shows a dark green and brown/blue variation – no two aircraft appear to have been identically camouflaged. This jet should be BuNo 151822, which was shot down by AAA on 27 August 1966. Its demise helped the US Navy reach the general conclusion that dark camouflage actually enhanced visual acquisition from the ground (US Navy)

A 'Tiger' Intruder sits tied-down over 'Connie's' Cat No 2 while NL 403 prepares to take tension on Cat No 1. This shot emphasises the original fuselage speed brakes on the Intruder. This arrangement was found to be unsatisfactory in operation, being particularly noted for reducing the aircraft's levels of thrust on carrier approach. The A-6's distinctive 'fingertip' speed brakes were introduced prior to the first deployment, and they eventually replaced the 'side boards'. The latter were deactivated and pinned closed on the bomber version, but not the EA-6A. A VQ-1 EA-3B Skywarrior sits in the background, with its 'Peter Rabbit' tail code (US Navy courtesy of the Grumman Historical Center)



VA-85 was the first Intruder squadron to complete two deployments, making a return appearance to Southeast Asia with the *Kitty Hawk*/CVW-11 team only five months after ending its previous cruise. After losing seven aircraft in 1965-66, VA-85 would have three more shot down on its second deployment. Here, NH 502 taxis on CVA-63's flightdeck with empty MERs. The presence of flak curtains in the cockpit indicates that this was a combat sortie. Note that the radome is no longer black, but now a natural fibreglass colour. BuNo 151591 would be converted into an A-6B and then a KA-6D, before finally earning its retirement in 1996 (US Navy)



Under Cdr Art Barie, the squadron claimed to be the first unit to drop aerial mines since World War 2 when it seeded the Song Giang and Song Ca Rivers on 26 February. The 'Panthers' did well during the cruise in that although CVW-9 lost 14 aircraft, only one was an Intruder – on 19 May 1967. That day saw a series of multi-carrier Alpha Strikes flown against targets near Hanoi on Ho Chi Minh's birthday. These missions cost the US Navy three aircraft, including 'Raygun 502' (BuNo 152594), which was hit by a SAM, causing Lt Cdr Gene 'Red' McDaniel and his B/N Lt Kelly Patterson to eject. McDaniel spent the next six years in prison, his heroic leadership while in camp leading to him receiving the Navy Cross after his release. Patterson appears to have been captured but did not survive, his exact fate never fully being explained by his captors.

Atkron-35 left the region on 30 June and headed for home. The unit would also return to Southeast Asia, in this case only six months later.

The 'Tigers' checked back into CTF-77 on 25 July for their second combat cruise, now as a member of CVW-17 aboard USS *Forrestal* (CVA-59). This was the wing's first deployment ever, as it had only been established on 1 November 1966 as Commander, Air Forces, Atlantic's (AirLant's) seventh carrier air wing. VA-65 was the only one of the five fighter or attack units onboard CVA-59 with previous time in Vietnam, and in spite of the ship's service since 1956 as a veteran of the Cold War, this was to be its first real test in a 'hot' conflict. As it turned out, tragically, *Forrestal's* war did not last long, for on 29 July, after only five days on the line, the ship suffered a catastrophic flightdeck fire that killed 134 men and destroyed 21 aircraft. No A-6s were among the carnage, but for the ship it was the end of the war, and what would become the only real combat deployment ever made by the first of the 'Super Carriers'.

It was not until the spring of 1967 that another Intruder squadron arrived in Southeast Asia, when VA-196 made its first appearance as an A-6 unit on 15 May. The 'Main Battery', as they called themselves (and also answering to their tactical call-sign, 'Milestone'), were the first Pacific Fleet squadron to fly the A-6. They had already made two combat deployments in A-1s before beginning their transition to the A-6 at Oceana with VA-42 in May 1966 and finally moving to their new homeport at NAS Whidbey Island, Washington, on 15 October.

NAS Whidbey Island was originally established during World War 2 as an auxiliary field to NAS Seattle, and from the mid-1950s it had housed

a number of patrol squadrons flying P2V Neptunes and P5M Marlins. During the later part of the decade Whidbey Island became home for AirPac's A3D Heavy Attack community. The Intruders arrived in 1966, establishing a presence that would dominate the base for the next three decades.

VA-196 was led by Cdr Leo Profilet, a career attack pilot who had flown almost 100 combat missions in AD-4 Skyraiders in Korea. Profilet was a 'lead from



the front' type, being well respected within the squadron and the air wing.

The first two line periods for CVW-14 had proven challenging, with the air wing losing two F-4Bs and a pair of A-4Cs, but no Intruders. Things really went south for 'Connie's' aviators on 21 August 1967 in a day that would prove to be one of the worst in the history of the Intruder. Skipper Profilet was the lead as four A-6As launched for a day attack on the Duc Noi

railway marshalling yard located just north of Hanoi. SAM and AAA activity increased along the route, and the aircraft (NK 400 BuNo 152625) of Lt Cdr Jim Buckley and B/N Lt Bob Flynn was damaged by flak, but they pressed on nevertheless.

Along with enemy activity, the strike group was finding weather a challenge, with heavy clouds and thunderstorms building throughout North Vietnam. Compounding the rising chaos enveloping the attack was the presence of a USAF strike nearby that was already taking losses, with two F-105Ds from the Takhli-based 355th TFW being shot down. The resulting din of emergency radio traffic made coordination of the US Navy formation all the more difficult.

SAMs guided on the Intruders as they started their dives and one struck Profilet's aircraft (NK 410 BuNo 152638), which immediately burst into flames as a wing separated from the airframe. He and B/N Lt Cdr Bill Hardman ejected and were quickly made PoWs. They would spend the next five-and-a-half years in prison. It had been Profilet's 59th mission in Vietnam. The remaining 'Milestones' observed two good parachutes from their CO's aircraft and then egressed the target area, but the heavy weather separated the division as they drove for the coast. At recovery time only one Intruder from the flight trapped aboard *Constellation*. The other two were missing.

It did not take long before their fate was known as the Chinese government radio soon reported that their forces had shot down two US Navy aircraft well inside their country using J-6 fighters (license-built MiG-19s). Lt(jg)s J Forrest Trembley and Dain Scott were listed as MIA (having been downed in NK 402 BuNo 152627), as was Jim Buckley. The only survivor was B/N Flynn, who was captured and imprisoned by the Chinese. He subsequently spent the next five-and-a-half years largely in solitary confinement, being released in March 1973 along with those being held in North Vietnam. Flynn would return to duty as an A-6 B/N and later command NFO Training Squadron 86 in Pensacola, before retiring with the rank of commander in 1985.

While US Navy radar tracking would later indicate that both Intruders had indeed flown 11 miles into Chinese airspace, Bob Flynn maintained that they were well south of the border, and that the MiGs had crossed into North Vietnam to attack them. The pair of 'Milestone' aircraft would be the only Intruders confirmed as lost to MiGs during the war.



**NH 507 takes a shot off *Kitty Hawk's* waist on an *Iron Hand* mission on 14 May 1967. The load is four AGM-45 Shrikes and a centreline rack of Mk 82 Snakeyes. One of the Shrike's biggest limitations was that its crew had to specify distinct seeker heads prior to launch for specific threat emitters. This particular load was undoubtedly selected to deal with a range of threats (US Navy via the *Tailhook Association*)**

The loss of three A-6s on one mission, as well as the popular Profilet, hit VA-196 hard. The XO, Cdr Ed Bauer, immediately fled up to CO and the next senior man, Cdr Bob Blackwood, announced to the ready room that he was now the second in command, and would assume the position of Executive Officer. The problem was that Blackwood was an NFO, and at that time NFOs were not eligible for command, and therefore the top two spots in a squadron. That did not stop him, however, and with his strength of personality Blackwood carried it off, even if his position was described as 'not quite legal' at the time.

The 'Main Battery' stayed in the fight, and replacements were quickly on the way, including four aircraft, six aircrew and 49 enlisted men from the otherwise ship-less VA-65. From Whidbey Island came a pair of VA-128 instructors who had immediately volunteered when the word went out that VA-196 needed help. Lt Cdr Charlie Hunter and Lt Lyle Bull checked into the squadron each with more than 600 hours in type – the most in the unit – and they remained crewed together.

On the night of 30 October they were given the Hanoi rail ferry site as a target. Situated over the Red River, it had been considered an important target since coming off the 'prohibited' list, yet it had avoided destruction up to now. Several attempts to attack the location with air wing Alpha Strikes had failed, largely due to the mind-bending number of SAM and AAA sites that defended the area. XO Blackwood had long held that a single Intruder going in at very low altitude at night could get to the target and hit it, strongly advocating that attacking the rail ferry site was the very mission that the type had supposedly been acquired for.

Hunter and Bull launched from 'Connie' and went 'feet dry' near the 'armpit' north of Vinh and then ran north towards Hanoi at 500 ft. Their load was 13 Mk 83 1000-lb retarded bombs on five MERs. They initially ran down parallel karsts, which allowed them to stay within the radar shadow provided by the ridgelines. First indications of SAM activity was not until 18 miles from the target, but it got lively in a hurry after that. With the first SAM that appeared, they both recalled that intelligence had told them that the SA-2 could not track below 1500 ft. When the missile appeared to follow them at under 500 ft Hunter started a high-G barrel roll to throw it off. The threat went behind them and exploded. However,

with the A-6 now upside down at 500 ft, their whole world was lit up with more SAMs and a tremendous amount of gunfire.

Counting at least five missiles on the way, the pilot righted the aircraft and took the Intruder down to 100 ft above the ground while doing more than 450 knots. Bull specifically recalls seeing 50 ft on the radar altimeter at times, but he had complete faith in Hunter. He also remembers that the SAMs did not follow them while they were that low. When the target appeared on the radar they pulled up to 200 ft to

**A section of 'Black Falcons' in flight, these jets being marked in dark green for the 1966-67 deployment. NH 501 survived the war and was retired as a KA-6D in 1994. The lead aircraft, however, was the first Intruder lost on cruise, being shot down on 19 January 1967 (US Navy via the Tailhook Association)**



release their 'Snakeyes'. The target was hit hard, and they immediately turned to the east in order to avoid Hanoi's Gia Lam airport, which was now right off the nose. The trip out was met by more AAA, with at least one 85 mm round coming close, but they managed to recover onboard *Constellation* as planned after a memorable 1.9 hours of flight time.

Hunter and Bull were not the first Intruder crews to prove the aircraft could be effective flying the solo low altitude night profile, but they were among the first to really be given credit for it, as both men were subsequently awarded the Navy Cross for the mission. Their flight would be heavily publicised for years as the textbook example of how to use a single A-6 in its designed role.

For the 'Main Battery', the 1967 deployment ended in time to be home for Christmas, with the knowledge that they would quickly start preparations for a rapid return to Southeast Asia in the late spring of 1968.

November 1967 saw the arrival of the combat-seasoned USS *Ranger* (CVA-61) to CTF-77, marking its third trip to Southeast Asia since August 1964, but its first with Intruders embarked. Onboard was CVW-2, which had one of the most varied configurations of the war, as it had every US Navy attack aircraft from the A-3 to the A-7 represented. This was the first deployment in the A-6 for VA-165, as well as the first trips for both the new A-7A Corsair II (VA-147) and EKA-3B Skywarrior (VAW-13, deployed in a combined detachment with two KA-3Bs from VAH-2), with other units flying the A-4C (VA-22) and RA-5C (RVAH-6). An E-2A unit (VAW-115) and a pair of F-4B squadrons (VF-21 and VF-154) rounded out the air wing.

The 'Boomers' had been the first former A-1 squadron to go through the new Intruder training syllabus at Whidbey Island, which was operating as part of the A-3 RAG, VAH-123.

VA-165 would lose two aircraft in Vietnam within three days of each other. On 23 January 1968 an A-6A (BuNo 152932) was heading for its target at low altitude from the sea when it apparently hit the water. Squadron XO Cdr Lee Kollmorgen was recovered but Lt Cdr Gerry Ramsden perished. Three days later another aircraft (NE 501 BuNo 152901) was lost near Vinh. Lt Cdr 'Buzz' Eidsmoe and Lt Mike Dunn were both killed. This loss fits the description of what was being described as an 'Intruder-unique incident', with the aircraft 'vanishing' while on a solo mission at night. In this event the wreckage was later found near the target, but in other cases a jet would be lost without any real sign of what had actually happened either to the A-6 or its crew.

On 26 January *Ranger* was pulled out of CTF-77 and sent north in response to the capture of USS *Pueblo* (AGER-2) by the North Koreans three days earlier. The carrier would remain off Korea until 5 March, when



VA-196 was the first Whidbey Island-based Intruder squadron to see combat in Southeast Asia. This familiar photograph depicts a section of 'Milestones' with 18 Mk 82s apiece – the lead jet has Snakeyes while the 'Dash-2' carries bombs with conical fins (US Navy)

Cdr Charlie Hunter (right) and Lt Lyle Bull (left) receive the Navy Cross at Whidbey Island from Commander, Fleet Air Whidbey, Rear Admiral Herman Trum, for their 30 October 1967 mission with VA-196 over North Vietnam. Bull still wears Naval Air Observer wings and not the recently authorised Naval Flight Officer set. Both men would later achieve the rank of rear admiral (US Navy via Rear Adm Lyle Bull)



it returned to the Gulf of Tonkin. The 'Boomers' quickly resumed striking the enemy, and they performed magnificently. On the evening of 24 March the crew of Lts Jim Pate and Roger Krueger were tasked with hitting the Kinh No railway marshalling yard. As they fought their way to the target their aircraft suffered several near-misses by SAMs, one of which reportedly knocked the A-6 momentarily out of controlled flight. The weapons system was also affected, which forced the crew to perform a degraded bomb drop on the target. They then egressed through a line of thunderstorms and still successfully recovered on *Ranger*.

Six nights later Lt Cdrs Gerry Rogers and Robert McEwen were given the Hanoi port facility as a target. They conducted a textbook-perfect low altitude systems attack on the target in spite of very heavy 57 mm and 85 mm AAA and SAM activity.

Both sets of 'Boomer' aircrew would receive the Navy Cross for their actions, making four pairs of Intruder crews who would receive the medal for actions over a one-week period. They would be the last awarded in Vietnam to medium attack aircrew for action in flight.

Because of its Korean sojourn, *Ranger* would spend 'only' 88 days on the line off Vietnam. The ship out-chopped from CTF-77 on 25 April and set sail for California.

### **IRON HAND**

The 'Sunday Punchers' made their second appearance in-theatre at the end of 1967, arriving on the line as a part of CVW-11 in *Kitty Hawk* on 23 December. Between combat cruises the 'Punchers' had made the first Intruder deployment to the Mediterranean Sea as part of CVW-7 embarked in *Independence* from mid-1966 through to early 1967. Little known (and certainly not advertised) was the fact that the unit had deployed to the Mediterranean with aircraft that boasted only partial systems due to parts shortages and the higher priority for spares being given to combat units. Lacking the parts needed to undertake effective all-weather strike missions, the A-6s of VA-75 were largely flown as 'lead-nosed, iron bombsight' aircraft exclusively in the benign Mediterranean theatre.

By early 1968 Cdr Jerry Zacharias' squadron had received a batch of brand new full-system aircraft specifically for the unit's second deployment to Southeast Asia. VA-75 also became the first A-6 unit to have a pair of new A-7A Corsair II squadrons (VA-37 and VA-105) as its light attack counterparts instead of A-4s. More significantly, the squadron also brought the first lot of A-6B aircraft with it, thus undertaking the debut

VA-196 had a rough first deployment, losing four aircraft and eight men, including CO Cdr Leo Profilet, who was made a PoW. The unit would make five cruises to Vietnam in the Intruder, tying it with VA-165 for the record. NK 406 is from the second deployment. The jet's orange-tipped MERs help aesthetics only slightly – they're painted in squadron colours more to establish ownership so as to keep them from being pilfered by other units in the air wing that might be short (*US Navy*)





deployment of the specialised defence suppression type in the fleet. The 'Punchers' would take three of them, along with 11 A-models, to Vietnam.

The 'Bravo' Intruder had electronic receivers that covered parts of the radio frequency spectrum from C- to F-bands, with specific threats like the SA-2's 'Fan Song' and 'Fire Can' AAA radar systems being high on the list of targets. The initial versions also required the deletion of the DIANE

and related bombing systems, making them dedicated to the *Iron Hand* mission. The B-model would be sequentially developed into four sub-variants, each better than the other in terms of frequency coverage and crew displays, while also eventually returning traditional weapons delivery capability to the airframe.

For weapons the aircraft carried the AGM-45 Shrike and the AGM-78 Standard missiles. The Shrike had been developed by the US Navy at Naval Ordnance Test Station China Lake, California, as the world's first operational Anti-Radiation Missile (ARM), entering combat with A-4E squadron VA-23 in 1965. A relatively simple weapon, the Shrike was used in Southeast Asia by the A-6A as well as the Skyhawk, before being adopted by the USAF's nascent *Wild Weasel* force.

The Shrike had its shortcomings, however. Operationally, it required selection of a specific passive seeker-head, with a limited frequency range and target radar, prior to launch. Once airborne, it could not be changed. The Shrike was also short-ranged, having an endurance that was considerably less than the SA-2s being fired at the *Iron Hand* aircraft. As famously stated, using the Shrike to duel with SAMs was 'like trying to fight a rattlesnake with a BBQ fork'. The weapon's warhead was not particularly large either, and it did not take the North Vietnamese SAM operators (who were by now the most proficient in the world) long to realise that merely shutting off their radar would usually defeat the missile. What the Shrike could do, however, was 'suppress' the site, which provided space and time to strikers while the SAM or AAA sites were otherwise occupied.

The Standard ARM, however, was a totally different animal. Another US Navy-developed weapon, the 'STARM' gave the A-6B greater stand-off range, placing it outside the SA-2's reach. The missile also had wider frequency coverage and could be programmed for a specific target prior to launch – something the Shrike could not do. It was also very expensive, and crews were instructed to wait for a 'high percentage' shot before sending it down range. The weapon went on to give sterling service through the war with the A-6B, as well as with the USAF's much better known F-105G *Wild Weasels*.

After initially looking at establishing three 12-aircraft A-6B squadrons dedicated to the mission (much like the USAF would do), the US Navy decided that it could not afford such a luxury and instead dealt with the



The June 1966 establishment of a west coast A-6 RAG led to this celebratory photograph featuring Miss Carol Cox, identified as 'Miss Golden Intruder', in the centre. These men were the first instructors for the Intruder detachment, formed within the Whidbey Island A-3 RAG. They are, from left to right, Lt Cdrs Charlie Hunter (later Navy Cross recipient) and 'Buzz' Eidsmoe (KIA with VA-165 on 26 January 1968), Lts Hugh Brainard and Jim Vester, Cdrs John Underwood (CO of VAH-123) and Jerry Patterson, Lts John Smith, Fred Holmes (MIA with VA-165 on 30 December 1968), Don Cotter, Rob Eichner and Carl Wiechert. Other 'plankowners' Lt Lyle Bull and Lt Cdr Don King are not present. The aircraft in the background, BuNo 151582, would later be converted into a KA-6D and lost with two crew while assigned to VA-85 on 22 February 1979 (US Navy courtesy of the Grumman Historical Center)



**VA-165 made its first trip to Vietnam with Intruders in November 1967 as a member of CVW-2 embarked in *Ranger*. NE 506 takes a shot off the ship's waist here, its unit marking consisting of a simple green boomerang on the tail. BuNo 152906 would later be converted into a KA-6D and be retired in 1994 (US Navy)**

***Ranger's* flightdeck during the 1967-68 deployment comes under the watchful eye of the Pilot Landing Aid Television cameraman, who recorded all operations on the roof. VA-165's NE 503 sits next to the island with a full load of bombs. Aircraft from VA-147 (giving the A-7A its combat debut) and VA-22 (A-4C) can also be seen (US Navy)**



requirement from within its existing attack force. Intruder squadrons that were assigned A-6Bs usually only had a small number of aircrew who were actually trained in the system and remained proficient in its use. This would include B/Ns who had some knowledge of the electronic 'beeps and squeaks' that the system provided to analyse the electronic environment.

The A-6B provided a sophisticated ARM capability for the US Navy that would eventually

lead to the AWG-21 system on a limited number of A-6Es. Its capabilities would not be substantially improved upon in the fleet until the AGM-88 High-speed Anti-Radiation Missile entered service with EA-6B Prowler squadrons in the mid-1980s.

With *Enterprise* and *Ranger* up north turning circles off Korea, the 'Punchers' were the only Intruder unit available to CTF-77. On 24 February squadron CO Cdr Jerry Zacharias and his B/N Lt Cdr Mike Hall made a night, low-level attack on the port facility located on the Red River southeast of Hanoi. The team managed to avoid heavy defences and accurately deliver 24 bombs, prior to exiting over downtown Hanoi as low as possible and at more than 500 knots. They were both awarded the Navy Cross for the mission, becoming the second US Navy A-6 crew to receive the decoration.

*Enterprise* re-entered the war on 22 February 1968, with CVW-9 and VA-35 returning as well – the latter, equipped with 11 A-6As and a trio of B-models, was led by Cdr Glenn Kollmann. The 'Black Panthers' arrival in-theatre marked the tenth Intruder deployment up to that point in the conflict, with all bar two of them having been conducted by Oceana-based units.

It was during work-ups that the 'Black Panthers' had fired the first live AIM-9 air-to-air missiles from a fleet Intruder. While the A-6 was certified to carry up to four of the weapons, in practice the Sidewinder only saw limited actual use in Vietnam with Intruders, as most units preferred to use their weapons stations to carry bombs or fuel, relying on the cover of darkness, low altitude flying and Phantom IIs to keep enemy fighters at bay.

As stated earlier, the 'Panthers' trip to *Yankee Station* had been interrupted when the ship and air wing were diverted to the South China Sea in response to the attack and seizure of *Pueblo* by North Korea on 23 January. With the Johnson administration choosing the political and not military route for the solution to this crisis, *Enterprise* moved south and began combat operations on 22 February.

On 24 February 1968 Skipper Kollmann and B/N Lt John Griffith participated in a night strike against a dock area and inflicted heavy damage on the target in the face of heavy opposition. They would subsequently be lost on 12 March when their aircraft (BuNo 152943) impacted the water forward of the ship after launch. Both men were

subsequently awarded the Navy Cross posthumously for their 24 February mission, becoming the third pilot-B/N team to receive the medal for a single mission.

Hailing from Kansas City, Missouri, John Griffith had earned his wings as an NAO in 1960 and served as a B/N in A3D-2s with VAH-1 at NAS Sanford, Florida, prior to joining the Intruder community. At the time of his death, Griffith may well have been the most highly decorated NFO in the service, with a Navy Cross, Silver Star, five Distinguished Flying Crosses, two individual-flight Air Medals, nine Strike/Flight Air Medals and a Navy Commendation Medal with Combat 'V'.

The 'Panthers' first combat casualties of the deployment occurred on the night of 28 February, when Lt Cdr Henry Coons and B/N Lt Tom Stegman were lost with their aircraft (NG 512 BuNo 152938) while attacking a target along the coast in North Vietnam. Small parts of the aircraft, including a flak-damaged tail section, were located but no trace of the crew was ever found. Two nights later another VA-35 jet (NG 504 BuNo 152944) went down whilst part of a three-aircraft strike on Cam Pha. Lt Cdr Tom Scheurich and Lt(jg) Richard Lannom also vanished with their aircraft, either being shot down or flying into the ground at some point during the flight.

Through early March bad weather plagued *Rolling Thunder* operations, which meant that *Enterprises'* A-4 and F-4 units were limited in what they could do. CVW-9's Intruders continued work as only they could, however. On the night of 16 March a division of 'Panthers' was launched to conduct a low-level strike on the railway marshalling yards north of Hanoi at Khe Nu. One of the Intruders (NG 510 BuNo 152940), flown by Lt Cdrs Ed Shuman and Dale Doss, was hit by AAA while at high speed when only some 200 ft above the ground. They both ejected and were soon made PoWs.

On 13 May Lt Bruce B Bremner and his B/N Lt Jack Fardy were conducting a night attack on the airfield near Vinh when they were hit by a 57 mm round in the port wing (of NG 510 BuNo 152951) after dropping a load of Mk 36 DSTs. Fire broke out and Bremner headed for the sea in a steep climb to try to starve the flames of oxygen. However, try as they might to reach the ship, things went from bad to worse on descent and an explosion ended the discussion, with both crew successfully ejecting and being recovered by the HC-1 SAR helicopter.

Bremner, or 'B<sup>3</sup>' (B-cubed) as he was later tagged, would complete the cruise, eventually fly more than 5000 hours in the Intruder, rise through sequential command (VA-85, CVW-17, USS *Savannah* (AOR-4) and USS *Coral Sea* (CV-43)) and run both of the A-6 wings in the US Navy, before retiring as a rear admiral. He was also noted for jumping out of two Intruders (the other being on 19 April 1971 while with the Naval Air Test Center) and landing an Intruder solo once after his B/N had ejected.

VA-35's final loss would occur on 24 June when Lt Nick Carpenter and B/N Lt(jg) Joe Mobley were hit by AAA (in NG 503 BuNo 152949) and crashed while working a waterway near Vinh. Both men were initially carried as MIA, but in August 1969 the US Navy reported that Mobley had ejected and was a PoW. In spite of a broken leg, he was displayed in public, beaten and forced to walk, before being given any medical care. Persevering, he would be released in March 1973 and return to full duty,

eventually rising to the rank of vice admiral before retiring in 2001 as the last Vietnam War PoW still on active duty.

*Enterprise* set sail for Alameda on 12 July after spending 100 days on the line. By then CVW-9 had lost 15 aircraft, six of them Intruders. The squadron's accomplishments on this deployment were boiled down into a press release that demonstrated that both the A-6 and medium attack had hit their stride and were doing what they were intended to do;

'Upon her arrival at *Yankee Station*, *Enterprise* encountered poor flying weather brought about by the Asian monsoon season. Nevertheless, two days after arrival, *Enterprise* A-6A Intruders from Attack Squadron 35 were able to carry out the first surprise raid on the port facility of North Vietnam's capital city of Hanoi. During the pre-dawn attack the all-weather, radar-controlled bombers dodged a flurry of surface-to-air missiles and a heavy barrage of anti-aircraft fire, inflicting severe damage against the vitally important enemy supply center.

'Two more strikes were made against the port facility during the following weeks. In each case, pilots of the highly sophisticated A-6s reported good system runs. Loaded with far more ordnance than contemporary aircraft, and depending on a computerised radar system to guide them to their targets, pilots of the Grumman-built Intruder welcomed the cover of darkness and inclement weather. Throughout February and much of March, North Vietnam was shrouded in a blanket of heavy clouds and torrential rains brought by the northeast monsoon. However, much like the proverbial mailman, the Intruders of Attack Squadron 35 penetrated the unkind monsoon night after night, striking repeatedly against the heartland of North Vietnam.'

For whatever US Navy aircrew thought they were accomplishing in Vietnam, the war's impact back home was dramatic as the 'Summer of Love' in 1967 turned within a year into the 'Summer of Chaos' as anti-war demonstrations, two stunning political assassinations (Senator Robert Kennedy and Dr Martin Luther King) and riots burned at the heart of America. After having been told that 'the light at the end of the tunnel is in sight', the Tet Offensive of late January 1968 proved an extreme surprise, no matter what the real military results were. The country was growing weary of war.

Politically, President Lyndon Johnson announced that he would not seek re-election. His other bombshell was to announce that, while keeping US troops in South Vietnam to support that government, he was suspending all bombing above 20 degrees North on 31 October 1968. Operation *Rolling Thunder*, the strategic campaign against the North, was officially ended the following day after more than three years of effort.

Yet the war still had almost five more years to go.

**Red Shirts at work. VA-85 ordnancemen carry out the hard, manual work of loading bombs on Intruders prior to another combat launch. In this case the end result of their efforts will be the signature load for the Intruder in Vietnam – 500-lb Mk 82 bombs on MERs. While mechanical cranks were available to aid in loading, a large number of these bombs would have to be manually lifted with the aid of tubular 'hernia bars' that were inserted into the front of the weapons before their fuses were installed. It was hard, back-breaking work that was repeated thousands of times on cruise (US Navy)**





# THE ONLY WAR WE HAVE

The bombing halt called by President Johnson caught most aviators in the US Navy like a left hook. While many men were privately questioning the way the war was being fought, most still believed that their efforts could bring a rapid end to the conflict if they were allowed to conduct operations as they knew best. That being said, most also felt that they would probably never be allowed to.

On the day the bombing halt took effect there were no fewer than five carriers in-theatre, three of which had Intruders embarked – *Ranger* (CVW-2/VA-165), *Kitty Hawk* (CVW-11/VA-75) and *Enterprise* (CVW-9/VA-35). The other two were modified-*Essex* class ships (USS *Ticonderoga* (CVA-14) and USS *Bon Homme Richard* (CVA-31)), with their standard F-8/A-4 wings.

Not surprisingly, operations changed considerably after the bombing halt. No longer going ‘downtown’ to Hanoi and Haiphong, the carrier-based Intruder units redoubled their efforts in the southern half of North Vietnam, while increasing attention on South Vietnam and the Ho Chi Minh Trail. This major swing in operational tempo led to a marked change in the air war, where, if the threat did not initially look quite as bad, the chances of ending up dead certainly remained, as predictably the North Vietnamese used the new sanctuary created by the Presidential announcement to move more SAMs and AAA into the southern half of their country.

What continued unchanged, at least for the next four years, was a well-orchestrated and unceasing rotation of carriers to Southeast Asia as the US continued to fight a war that was becoming increasingly hard to understand, both professionally and as a nation.

The first carrier to arrive in the war zone under the ‘new rules’ was USS *America* (CVA-66), the US Navy’s newest ‘flat top’, and yet another ship based on the east coast at Norfolk. The vessel had CVW-6 embarked, on its first combat deployment as well, with a thoroughly modern ‘big-deck’ F-4J/A-7A/A-6 strike configuration. Making up the medium attack component were the veteran ‘Black Falcons’ on their third trip, this time with both A- and B-models. *America* commenced its first line period on 31 May, and would spend 112 days on the line conducting operations, before

The ‘Main Battery’ of VA-196 made their first two Intruder cruises with CVW-14 in *Constellation*. NK 401 flies serenely here with empty MERs circa 1968. BuNo 152626 was later converted into a KA-6D and stricken in 1992 (US Navy)





**An Intruder squadron at war.** The ready room of VA-196 'Main Battery' in front of an A-6A aboard *Constellation* during the 1968-69 deployment, with several members enthusiastically displaying the fabled 'Hawaiian Good Luck Sign' of the period. Squadron CO Ed Bauer is in the front row, fourth from the right, XO Lou Dittmar is to his left. At least five men in this picture were killed in action during this deployment – Mike Bouchard (19 December 1968) fourth from the left in the back row, Dom Spinelli (second from the right in the front row) and Larry Van Renselaar (third from the right in the back row), both on 30 September 1968, and Mike Babcock (second from the right in the back row) and George Meyer (first from the right, in the back row), both on 18 December 1968. On the far left of the back row is Dan Brandenstein, a future Space Shuttle astronaut (US Navy)

and, later, KIA. It would be the only Bravo-model lost due to enemy action during the entire war. A little over a week later, on 6 September, VA-35 Skipper Cdr Ken Cosky and Lt Cdr Richard McKee were conducting night armed reconnaissance with a mixed load of ordnance near the Song Ca River. After dropping bombs on one target they engaged a second, where they were hit hard by AAA, which quickly rendered their aircraft uncontrollable. Both men ejected, and Cosky would be captured and made a PoW, while McKee was recovered by a US Navy helicopter. With the Skipper's incarceration Cdr Charlie Hunter (of the 30 October 1967 Navy Cross mission) was promoted to squadron CO.

*Constellation* returned to Vietnam after a five-month turnaround, reporting to CTF-77 on 14 June with CVW-14 embarked. The latter included VA-196 on its second Intruder cruise. The 'Main Battery' had also been given several B-models for the first time, and the unit remained in-theatre through to 23 January 1969.

The squadron would lose four Intruders during the cruise, the first of which was considered operational in nature, rather than combat-related. On 20 August Lt(jg) Dan Brandenstein and squadron Flight Surgeon Lt W Neal launched from 'Connie' in one of the unit's A-6Bs (BuNo 151560). When the slats failed to fully retract after takeoff, the pilot tried to zero-G the aircraft to induce the recalcitrant leading edge slats to seat themselves properly. The aircraft instead quickly rolled through 90 degrees right-wing down, with the nose slicing as well. Both crew ejected and were recovered. Brandenstein subsequently completed 192 combat missions and became a NASA astronaut, flying in the Space Shuttle.

The squadron's first combat loss of the 1968-69 deployment occurred on the night of 30 September, when Lt(jg) Larry Jack Van Renselaar and Lt Dom 'Spike' Spinelli were apparently hit by an SA-2 while working a road near Vinh in NK 404 (BuNo 154149). Reports later stated that the crew's last call was a warning about two SAMs being launched against them. Neither survived.

On 18 December NK405 (BuNo 154150) was flying a *Steel Tiger* strike in daylight on roads in Laos when the aircraft was engulfed in flames while on its eighth pass. The jet had either been hit by AAA or, perhaps, suffered early bomb detonation. Both crewmen, Lt Gary Meyer and Lt(jg) John Babcock were killed. The following day the squadron suffered its final loss

heading home on 20 November. The ship and air wing would lose 15 aircraft in-theatre. While CVW-6's A-7 units would be particularly hard hit, with eight being lost either operationally or due to enemy action, two of the others would be 'Buckeyes'.

On the night of 28 August Lt(jg)s Bob Duncan and Alan Ashall were in A-6B AE 521 (BuNo 151561) covering a strike near Vinh Son. Their Intruder was apparently hit by an SA-2, with both aircrew being listed as MIA

when NK 407 (BuNo 154152) was apparently hit by AAA during a night strike on the Ho Chi Minh Trail in Laos. While a USAF SAR helicopter was able to recover B/N Lt Bob Colyar the following day, pilot Lt Mike Bouchard was never found, and would subsequently be listed as KIA.

*Coral Sea* arrived on 23 September, already on its fourth combat deployment under CTF-77. The ship was also marking the first deployment of a *Midway*-class vessel with an Intruder squadron embarked. Since the 'Coral Maru' would never receive the major improvements that sister-ship USS

*Midway* (CVA-41) was receiving at that time, it would remain the smallest flightdeck to operate the A-6 in combat until decommissioned in 1990. Onboard was CVW-15, with the 'Knightriders' of Atkron-52 making their first cruise in A-6s since conversion from Skyraiders. The Whidbey-based squadron was noted for its offbeat insignia of an armoured knight waving a mace while sitting astride a sea turtle, leading to other, less flattering, nicknames such as 'Turtle Herders' and 'Turtle Beaters'.

As a member of CVW-15, the 'Knightriders' were teamed with a pair of A-4 Skyhawk units (VA-216, with A-4Cs, and A-4F-equipped VA-153), along with two F-4B squadrons and E-1B, RF-8 and A-3 detachments. Through 110 days on the line VA-52 lost only one aircraft – on the night of 13 October A-6A NL 411 (BuNo 154141) of Cdr Quin Orell and Lt Jim Hunt was targeted by an SA-2 while egressing at low altitude southeast of Vinh. After reporting their status over the radio their radar 'blip' was lost off the coast, with no real indication as to what had caused the loss. No sign of wreckage, or the crew, was found.

## FURTHER RESTRICTIONS

Following six months of being limited to targets in southern North Vietnam, President Johnson went ever further on 31 October when he ordered the cessation of bombing in all of North Vietnam. This directive, made only five days before the Presidential election, still allowed reconnaissance flights to be conducted over the north to monitor military developments. If there was any intention to influence voters with this decree it failed, as the Republican candidate, Richard M Nixon, soundly defeated Johnson's Vice President, Hubert Horatio Humphrey, at the polls. Nixon would be inaugurated on



VA-196 NK 407 drops a load of Mk 82 Snakeeyes from high altitude with their fins closed during the 1968 cruise. The tail stripe and fuel tank markings show the squadron's preferred insignia orange paint. BuNo 154152 was shot down in Laos on 19 December 1968, with Lts Mike Bouchard being killed and Bob Colyar rescued (US Navy)

Lts Lyle Bull (left) and Mike Bouchard (right) were old friends who had started out in A3D Skywarriors. During the 1968-69 deployment in *Constellation* with VA-196 they were crewed together, and flew almost all of their missions as a team. On the night of 19 December, however, Bull was in Thailand working on a classified targeting project with the USAF. His pilot flew that night with Bob Colyar and they were shot down in Laos. Colyar was rescued, but Bouchard was killed (US Navy via Rear Adm Lyle Bull)







The 'Knightriders' of VA-52 made their first Intruder cruise with CVW-15 in *Coral Sea* in 1968-69. This is NL 412 just as it takes tension for launch on Cat No 1. The load is light – two empty MERs, a centreline tank and four CBU-39s, which were never particularly common for US Navy aircraft, the service usually preferring the Mk 20 Rockeye as its cluster weapon. This aircraft, BuNo 154144, would be lost with VA-65 in May 1983 as an A-6E (US Navy via Angelo Romano)

The 'Boomers' made two consecutive deployments in *Ranger* as part of CVW-2, with only a five-month respite between them. Here, a division flies near Deception Pass in Washington State. All three of these aircraft would survive into the 1990s (US Navy)



20 January 1969 and, at least initially, continue his predecessor's bombing policies in Southeast Asia.

*America* was replaced by *Ranger*, which chopped to CTF-77 on 12 November with CVW-2 embarked. The latter included VA-165 on its second Intruder deployment. The air wing retained its unique configuration with two light attack units flying different

types, VA-155 A-4Fs and VA-147 A-7As. This arrangement would be the last time Skyhawks deployed as light attack teammates with Intruders, as all subsequent cruises by *Midway*-class, or bigger, carriers would involve only Corsair IIs. The 'Scooters' continued to see action in declining numbers from the flightdecks of modified *Essex*-class carriers. By the end of the war only CVW-21, embarked in USS *Hancock* (CVA-19), retained Ed Heinemann's classic aircraft.

As for VA-165, Cdr Lee Kollmorgan's squadron started operations off Vietnam on 29 November with 15 A-6As. By mid-April the ship had spent 91 days on the line, with the loss of four air wing aircraft, but no Intruders.

On 15 January 1969 *Kitty Hawk* reported to Seventh Fleet on its fourth trip to Southeast Asia, all with CVW-11 embarked. Oceana-based VA-65 was onboard, with a mixed group of a dozen A-6As and a pair of B-models. The ship and air wing would lose seven aircraft on cruise, three of which were due to enemy action and only one of these would be an Intruder. On 3 April NH 507 (BuNo 155587) was striking a suspected fuel storage area near the Mu Gia Pass in Laos under FAC control when the aircraft was hit by AAA, which quickly led to engine failure and other issues. Lt Cdr Ed Redden and Lt John Ricci both ejected and were rescued by USAF SAR helicopters and taken to Nakhon Phanom Royal Thai Air Force Base (RTAFB).

Next on tap was supposed to be *Enterprise*, which had passed under the Golden Gate on 6 January on its fourth trip to the war zone, all with CVW-9 embarked, although this time with a new medium attack unit. VA-145 'Swordsmen' was the third Whidbey-based squadron to convert to the A-6, and it was yet another combat-proven A-1 unit that in this case had received its first A-6 on 4 June 1968.

The 'Big E' was doing a 'running' Operational Readiness Inspection (ORI) off Hawaii on 14 January when it suffered the third major carrier fire of the Vietnam War. In an incident remarkably similar to the one that befell *Forrestal* in 1967, a five-inch Zuni rocket was launched across the flightdeck while the air wing was spotted for launch. The resultant fire killed 27 crewmen and injured 314 others. Remarkably,



## COLOUR PLATES

1

A-6A BuNo 152600/NG501 of VA-35, USS *Enterprise* (CVAN-65), 1966



2

A-6A BuNo 152902/NL 500 of VA-35, USS *Coral Sea* (CVA-43), 1969



3 A-6C BuNo 155660/AJ 511 of VA-35, USS *America* (CVA-66), 1972



4 A-6A BuNo 154133/NL 401 of VA-52, USS *Coral Sea* (CVA-43), 1968



- 5 A-6A BuNo 151817/NL 407 of VA-65, USS *Constellation* (CVA-64), 1966



- 6 A-6A BuNo 152904/AA 504 of VA-65, USS *Forrestal* (CVA-66), 1967



7

A-6A BuNo 151592/AG 504 of VA-75, USS *Independence* (CVA-62), 1965



8

A-6B BuNo 151559/NH 520 of VA-75, USS *Kitty Hawk* (CVA-63), 1967





9

A-6A BuNo 152946/AC 500 of VA-75, USS *Saratoga* (CVA-60), 1972



10

A-6A BuNo 151792/NH 813 of VA-85, USS *Kitty Hawk* (CVA-63), 1965



11

A-6A BuNo 151785/NH 805 of VA-85, USS Kitty Hawk (CVA-63), 1965



12

A-6A BuNo 151591/NH 502 of VA-85, USS Kitty Hawk (CVA-63), 1966



13  
A-6B BuNo 151561/AE 521 of VA-85, USS *America* (CVA-66), 1968



14  
A-6A BuNo 152954/NL 504 of VA-95, USS *Coral Sea* (CVA-43), 1973



15

KA-6D BuNo 152598/NF 517 of VA-115, USS *Midway* (CVA-41), 1971



16

A-6A BuNo 152606/NG 500 of VA-145, USS *Enterprise* (CVAN-65), 1969





17

A-6A BuNo 155678/NE 506 of VA-145, USS *Ranger* (CVA-61), 1970

18

A-6A BuNo 155714/NE 504 of VA-145, USS *Ranger* (CVA-61), 1972

19

A-6A BuNo 152930/NE 511 of VA-165, USS *Ranger* (CVA-61), 1967



20

A-6A BuNo 155683 NG 502 of VA-165 USS *Constellation* (CVA-64), 1972



21

A-6A BuNo 155608/NE 506 of VA-196, USS *Ranger* (CVA-61), 1969

22

KA-6D BuNo 151821/NK 514 of VA-196, USS *Enterprise* (CVAN-65), 1972

23

A-6A BuNo 155661/NL 511 of VMA(AW)-224, USS *Coral Sea* (CVA-43), 1972



24

A-6A BuNo 155615/CE 06 of VMA(AW)-225, Da Nang, 1969





25

A-6A BuNo 152934/DT 10 of VMA(AW)-242, Da Nang, 1967



26

A-6A BuNo 155685/DT 1 of VMA(AW)-242, Da Nang, 1970





27  
A-6A 154167/ED 10 of VMA(AW)-533, Chu Lai, 1968



28  
A-6A BuNo 155706/ED 4 of VMA(AW)-533, Nam Phong RTAFB, 1972

29

EA-6A BuNo 156985/RM 34 of VMCJ-1, Da Nang, 1968



30

EA-6A BuNo 156991/AC 610 of VMCJ-2, NAS Cubi Point, 1972





Lt Cdr Bill Boissenin of VA-165 inspects his load of Mk 82 Snakeyes prior to launching on a strike from *Ranger* in 1968. He is wearing a rather impressive bandolier of pistol ammunition, along with his survival gear (US Navy via Peter Mersky)

After their fire-shortened 1967 deployment in *Forrestal* VA-65 returned to Southeast Asia for its third trip in December 1968 with *Kitty Hawk* and CVW-11. NH 512 is shown here at North Island prior to being craned aboard at the start of the cruise. Markings were minimal, consisting of a simple orange stripe on the fin tip and shading to the tailcode. The white radome, sealed fuselage speed brakes and ALQ-100 antennas extending from the wing pylons all represent airframe changes implemented during the war (US Navy via Angelo Romano)



this incident would delay the ship only three months before it reported to Seventh Fleet, and CTF-77, on 17 March.

## PROVOCATION OFF KOREA

The routine of combat operations off Vietnam was disrupted on 14 April when North Korean MiG-17s shot down a VQ-1 EC-121M about 50 miles off the coast. Some 31 men died in the unprovoked attack, which occurred on what also happened to be the 57th birthday of 'Great Leader' Kim Il-Sung. President Nixon ordered an immediate reaction and the US Navy responded by reactivating TF-71.

Four attack carriers were assigned to Seventh Fleet at that point, although only three of them were actually on the line in Vietnam on the 14th. *Enterprise*, *Ranger* and *Ticonderoga* were immediately sent north, along with the anti-submarine carrier USS *Hornet* (CVS-12), to commence operations at 'Defender Station' off the east coast of Korea.

Back in Vietnam, *Kitty Hawk* hurried out of a port call and was soon joined by newly arrived *Bon Homme Richard* to keep up combat flights over Southeast Asia. Only the 'Hawk' had Intruders assigned, and it would remain the only 'big deck' carrier available for Vietnam ops for several weeks.

In spite of the impressive show of force off the Korean peninsula, TF-71 would eventually be deactivated without firing a shot. After the twin insults of the seizure of *Pueblo* and now the destruction of the EC-121, the lack of any military reaction stuck in the gut of many in the service. One of the better quotes on the point was voiced by the Congressman L Mendall Rivers (Democrat-South Carolina), the Chairman of the House Armed Services Committee;

'How long will we let a little insignificant Communist satellite push this nation to the point where we are being laughed at by the rest of the world?'

In the end the Nixon administration believed they probably could not carry out two separate major military actions in the Far East and chose to go down the diplomatic route instead.

*Enterprise* 'headed for the barn' on 12 July and was relieved by *Constellation*, again with CVW-14 embarked, but this time with VA-85, which was making its fourth combat deployment in less than four years. This trip involved 128 days on the line, and while the air wing lost seven aircraft, none of them were 'Black Falcons'. No other squadron had given as much as VA-85 up to this point in the war. It had lost 12 Intruders since its first deployment in *Kitty Hawk* in 1965, and 13 of its men had not returned to their families in Virginia and two more had to wait until the end of their incarceration as PoWs. Atkron-85 subsequently returned

to Oceana at the end of the cruise and moved to CVW-17, with which it would make its next eight cruises to a bucolic Mediterranean in *Forrestal*.

The 'Hawk' finally departed for home on 27 August after eight months away and returned to San Diego on 4 September. While





CVA-63 would return the following year, VA-65 had completed its third consecutive deployment to Vietnam and, upon returning to Virginia's Tidewater region, moved to CVW-7 in *Independence* for subsequent deployments to the Mediterranean.

*Coral Sea* was next on deck, reporting to CTF-77 on 14 October and still carrying CVW-15, although with VA-35 onboard this time. The 'Black Panthers' were on their third consecutive cruise to Southeast Asia, and their trip marked a passage as the last Oceana-based Intruder squadron to deploy to Vietnam on a Pacific Fleet carrier. Although other AirLant units would be seen in-theatre, from now on it would only be on East Coast-based flightdecks. The 'Panthers' would lose only one aircraft on this deployment when, on 26 December, a tanker-configured A-6A (BuNo 152891) crashed due to unknown reasons while approaching the carrier during Case I (daylight) conditions. Both crewmen, Lt(jgs) Walt Kosky and Dustin Trowbridge, were killed.

*Ranger* returned on 4 November 1969, with CVW-2 embarked. Included in the air wing was VA-196, making its one and only deployment during its 30+ years in Intruders not as a member of CVW-14. With the monsoon in full swing, this would be another harsh cruise for the 'Milestones', as they lost five aircraft during the eight-month deployment, including the only four aircraft CVW-2 lost due to direct enemy action.

The first loss occurred on 22 November when NE 513 (BuNo 155613) was working a target in Laos' A Shau Valley in daylight. Cdr Lloyd Richards and his B/N Lt(jg) Dick Deuter had a wing collapse catastrophically as they started to pull out of a run. Richards managed to eject and was recovered by the USAF with a broken back. Deuter was killed. While AAA may have been the cause, suspicion also leaned towards material failure due to fatigue – a factor that would continue to haunt the Intruder community for many years. That same night the 'Milestones' lost yet another aircraft as NE 507 (BuNo 155607) crashed while conducting armed reconnaissance of the Trail near the Laos/South Vietnam border. The aircraft's wingman saw only a flash on the

VA-145 made its first Intruder deployment with CVW-9 in *Enterprise* in 1969. Here, a pair of 'Swordsmen' prepare for launch during work-ups in December 1968. BuNo 152604/NG 513 was lost with VA-52 on 28 March 1973 when the wing separated from the aircraft during a bombing run, killing both crew. BuNo 152626, which survived the war, is marked up as the commanding officer's aircraft. The tiny 'JR' to the right of the 'NG' tailcode was inspired by the CO's name, N Gooding Jnr (*US Navy via Tailhook Association Collection*)

VA-85's fourth, and final, deployment to Vietnam was with CVW-14 and *Constellation*. The squadron's markings – an orange stripe on the tail and the unit insignia on the turtleback – were surprisingly similar to those worn by VA-196, which the unit had temporarily replaced within the air wing. 'Buckeye 513' is shown here unleashing a string of Mk 82 Snakeyes from level flight at high altitude. BuNo 155668 was the 399th A-6A built, and it would later be converted into an A-6E and lost with its crew while flying with VA-176 in December 1985, the jet hitting the ground in Dare County, Virginia, at night (*US Navy*)





Making their third cruise to Vietnam were the 'Black Panthers' of VA-35, who chopped to CTF-77 in September 1969 with CVW-15 and *Coral Sea*. They had adopted their classic tail markings based on their logo on their previous deployment, which were some of the most attractive the Intruder ever carried. BuNo 152914 was later converted into an A-6E and stricken in 1994 (US Navy via Angelo Romano)

The only deployment VA-196 made in Intruders that was not with CVW-14 was its 1969-70 trip with CVW-2 and *Ranger*. Squadron markings remained remarkably stable throughout this period, with the normal orange stripe on the tail and black ace of spades behind the cockpit. NE 506 is being directed towards Cat No 4 on *Ranger* in this photograph, the jet being loaded with Mk 82s. An RA-5C from the 'Savage Sons' of RVAH-5 is in the foreground. BuNo 155608 was lost while serving with VMA(AW)-121 as an A-6E in October 1983 when a wing separated from the aircraft during a bombing run, killing both crewmen (US Navy via Tailhook Association)



ground with no indications of what had happened. The crew, Lt Cdr Dick Collins and Lt Mike Quinn, were both listed as KIA.

Roughly five weeks later, on 2 January 1970, a replacement NE 507 (BuNo 152937) caught fire and exploded while conducting a day strike in Laos. AAA was suspected, although premature

bomb detonation could not be ruled out. Despite the crew having managed to eject and an intense SAR effort being mounted, Lts Bruce Fryar and Nick Brooks would both be reported KIA. Later information would indicate that Brooks may have been captured by the Pathet Lao and executed.

Lt Cdr 'Pee Wee' Reese and Lt(jg) Ed Frasier were more fortunate on 6 February. They had been bombing trucks on the Trail in Laos near dusk when tagged (in NE 516 BuNo 155618) by AAA. After spending a harrowing night in the jungle, the pair was snatched by USAF rescue forces in the morning. Reese would return for the next deployment with VA-196 and eventually command an EA-6B squadron. The squadron's final loss occurred on 28 February when Lts Bob Wittenberg and Wayne Paul had NE 505 (BuNo 155605) catch fire during a day catapult shot. Both men ejected and were quickly recovered.

After losing five aircraft in four months, VA-196 finished out the remainder of the cruise without loss. *Ranger* out-chopped from CTF-77 on 23 May and returned home. While the ship would be back in-theatre only five months later, the 'Main Battery' moved back to CVW-14, and *Enterprise*, for its next combat cruise in 1971-72.

The next carrier on the line was *America*, back for a return engagement from Norfolk. Notably, it carried CVW-9 in what would be the only time a Pacific Fleet wing flew a combat deployment in Southeast Asia from the flightdeck of an Atlantic Fleet carrier. Onboard as the medium-attack components were the 'Boomers' of VA-165 for their third appearance, and they brought a new strain of Intruder with them, the A-6C TRIM.

As stated by some who flew it, the 'Charlie' model was really a science experiment, a 'Model T design' that carried what was described as a 'beyond the state-of-the-art' system called TRIM (Trails-Roads-Interdiction Multi-sensor). The basics were pretty straightforward – hanging from the jet's centreline station was a huge, semi-permanent pod that contained low-light television (LLTV) and Forward-Looking Infra-Red (FLIR). The assembly was very similar to what land-based VAH-21 had been carrying on its AP-2Hs Neptunes

in-theatre since September 1968. In this case, the A-6C was an attempt to improve the Intruder's night-attack capabilities by giving it vision in the dark beyond any other tactical jet in-theatre. Once again, the USAF had nothing like it yet – at least not in a tactical jet.

An even dozen A-6Cs were built or modified with TRIM, and they were truly unique systems. The 'Boomers' received eight of the 12 turned out by Grumman, and had little time to get up to speed on the aircraft before departing for cruise. The centreline pod's effects on flight were quickly noted, as it weighed about a ton-and-a-half by itself, which typically meant about 3000 lbs less fuel on approach to the carrier, or up to one-third less than normal. Its drag count was also serious enough to turn the aircraft into something of a slug, particularly when heavy with fuel. It was quickly noted that A-6As could walk away from the C-model in most cases, particularly right after takeoff.

TRIM was also a maintenance headache, both when it came to working on the unique systems themselves and for otherwise routine issues like changing engines. In combat, the low light display had a bad tendency to 'blossom' and become all but useless when subjected to sudden light – as in when the enemy fired AAA. Nevertheless, in fine US Navy fashion, the 'Boomers' made it work, writing the book on the system's use in combat. They ended up taking five A-6As, eight A-6Cs and three A-6Bs with them on *America*, as well as 15 civilian Technical Representatives (TechReps) to help keep the aircraft 'Up'. In the end, the pioneering TRIM system led the way to what eventually became a truly superb system, the A-6E TRAM (Target Recognition Attack Multi-Sensor).

*America* and CVW-8 returned home in time for Christmas 1970. They had had an excellent combat deployment, with 100 days on the line without losing an aircraft in combat and only three in operational mishaps.

## COMMUNITY GROWTH

Meanwhile, back in the US, the Intruder community continued to grow so that by mid-1970 there were 11 operational squadrons flying the type, with all but four air wings being assigned the medium attack aircraft. While most of these units were now combat veterans, two Oceana-based A-6 outfits (VA-34 and VA-176) would deploy only to the Mediterranean and never see combat in Southeast Asia. On the West Coast, a pair of additional units, VA-115 and VA-163, were being held 'on paper' for possible reorganisation with Intruders. While the 'Saints' of VA-163 (previously equipped with the A-4E) would be formally disestablished in July 1971, VA-115 would eventually return.



The Charlie-model Intruder was introduced into combat by VA-165 during its 1970-71 deployment. Twelve were converted from A-models, with the TRIM assembly semi-fixed on the centreline. The system deployed with several units and proved to be problematic in service, although it showed the way towards the ultimate Intruder, the A-6E TRAM. NG 514 is shown in flight with the pod, as well as four empty MERs (US Navy)

VA-165 took a mixed group of A-6A, B and C-models with it on its 1970 deployment in *America*. NG 503 is a stock A-6A, and it is shown making a high-altitude level drop of Mk 82s in indifferent weather. BuNo 155677 would be shot down by a SAM during the following cruise, on 30 December 1971 (US Navy)







**'Boomer' A-6C NG 522 traps aboard America during the 1970 deployment, with a VAQ-132 EKA-3B sitting behind it. The TRIM assembly weighed 3000 lbs and the drag and weight penalty associated with it was significant, typically meaning less fuel on landing and worse single-engine characteristics. The type made only a handful of deployments before the 11 remaining airframes were converted back to A-6A configuration (US Navy)**

VA-128 was established at Whidbey Island on 1 September 1967 from the original A-6 training section of the A-3 RAG VAH-123. The 'Golden Intruders' were the west coast counterpart to VA-42, and they provided aircrew and maintenance training through to September 1995. Here, a division of their A-6As fly westbound over their home town of Oak Harbor, Washington, circa late 1967. The Naval Air Station's seaplane base, which operated SP-5B Marlins into the early 1960s, is located directly under NJ 801. The jet facility at Ault Field is located across the island about three miles away (US Navy)



VAH-123 that had commenced its west coast A-6 syllabus a year prior. Down at MCAS Cherry Point, North Carolina, the Marine Corps had formed VMAT(AW)-202 in January 1968, allowing it to conduct its own, Marine-focused, Intruder training.

Critical to the replacement effort was the delivery of nine new TC-4C Academe aircraft from 1967. Developed from Grumman's turbo-prop powered Gulfstream I business aircraft, the 'Tick' had a large nose section grafted onto it that contained the Intruder's radar and an A-6 cockpit reproduced in the fuselage that allowed students to train in a flight environment with instructors present. These airframes would remain in the community into the mid-1990s, proving to be one of the better investments the US Navy made in the area of Intruder readiness.

## **RANGER RETURNS**

November 1970 marked the return of *Ranger*, roughly five months after it had ended its previous deployment. Its air wing was CVW-2 yet again, now with VA-145 embarked. The 'Swordsmen' brought with them 16 Intruders, split between A- and C-models, the latter taken over from VA-165. The ship would spend 123 days on the line, with three combat losses – all A-7Es in this case. Operational losses would number seven, including a pair of A-6s. The first was lost on the night of 8 January 1971 when an A-6C (BuNo 155647) went into the water right after its cat shot – squadron XO Cdr Keith Curry was killed, while Lt Cdr Gerry Smith was recovered. Six weeks later, on 24 February, A-6A (BuNo 156994) also crashed off the bow after launching. In this case both Lt Cdr Bill Galbraith and Lt D D Waters survived after their unplanned swim call.

The 'Knight Riders' returned to Southeast Asia on 27 November as members of CVW-11 aboard *Kitty Hawk*. VA-52 was now on a 'big deck' after its cruise in *Coral Sea*. The squadron had both A- and B-model jets, and spent 138 days on the line. CVW-11 did not suffer a single combat loss during this period. Among the cruise's more notable events was Cdr Lenny Salo taking over the squadron reins on 23 November, becoming the first



NFO in the US Navy to assume command of a carrier-based squadron in the process. Many others would follow.

On 7 May 1971 *Midway* reported to CTF-77, making its first appearance in-theatre since 1965. The lead ship of its class, CVA-41 had undergone a massive rebuild over five years, resulting in a ship that was considerably larger than what it had been since having its angled flightdeck installed in the late 1950s. Although the effort would guarantee the vessel would outlast its two sisters, the hiatus also meant that *Midway* would not equal sister *Coral Sea*'s experience in Vietnam, which would include six trips to Southeast Asia as opposed to *Midway*'s three, or the sole 1966-67 combat deployment of the third member of the class, USS *Franklin D Roosevelt* (CVA-42).

*Midway* was assigned CVW-5, which had undertaken six previous CTF-77 cruises as an F-8/A-4 air wing embarked in '27C' ships like *Bon Homme Richard* and *Hancock*. The air wing's first Intruder squadron would be VA-115. Atkron-115 had been a Lemoore-based A-1 unit that was transferred administratively to the naval air station's Skyhawk RAG (VA-125) in August 1967 after completion of its second combat deployment in Skyraiders. This odd arrangement, where VA-115's 'command' was assigned with no aircraft or men to the RAG CO in title only, lasted until 1 January 1970, when the unit's name was transferred to Whidbey Island. Here, it was built up again as the Pacific Fleet's fifth Intruder squadron.

Initially assigned to CVW-16, with aircraft suitably marked with the air wing's 'AH' tailcode, VA-115 moved to CVW-5 in February 1971 when CVW-16 was disestablished. The squadron proudly carried the nickname 'Arabs', which was traditionally voiced with a strong inflection on the first syllable, as in 'A-rab'.

To VA-115 fell the job of introducing the 'new' KA-6D version of the Intruder to WestPac. First deployed with VA-85 and



The 'Swordsmen' returned to Vietnam for their second Intruder deployment in 1970 with *Ranger* and CVW-2. The squadron's markings were now three dark green 'swords' displayed horizontally on the tail. NE 504 is shown here lifting off *Ranger*'s waist. BuNo 157018 transferred to VA-52 for its 1972 deployment, and was subsequently reported missing with its two crew on 20 August (US Navy)

VA-145 was the second squadron to deploy with A-6Cs, and would lose one during the cruise. NE 517, which should be BuNo 155684, takes a shot from *Ranger*'s waist during the 1970-71 deployment, the jet laden down with eight Mk 82 bombs and two fuel tanks, along with the bulky TRIM pod. A VAQ-134 EKA-3B looms in the background (US Navy via the Tailhook Association)



NE 500 is seen in a near-perfect paint scheme prior to VA-145's 1970-71 deployment with CVW-2. The '00' numbers indicate that this is a 'CAG bird', but it does not show any of the colourful markings that some squadrons applied. This aircraft would be lost after an engine failed during a night cat shot on 24 February 1971. Both crewmen were recovered (US Navy)



VA-52 made three deployments to Vietnam with A-6s, each one with a variation of its knight's helmet marking on the tail. The 1970-71 effort in *Kitty Hawk* featured a short plume, although all versions used the aircraft's red tail beacon as the 'eyes'. This photograph, taken over Washington state prior to cruise, shows a 'Knightrider' practising day refuelling from a VAH-10 KA-3B, which is marked for Det 19 aboard *Hancock* (US Navy)

a dedicated tanker which could, with five external fuel tanks, hold 26,000 lbs (roughly 4000 gallons) of JP-5, as opposed to 43,200 lbs in the KA-3B or 16,200 lbs available in a tanker-configured A-7A. The 'Arabs' took ten bombers and four tankers with them as they left home on deployment in *Midway*.

Among the pilots in the squadron was Lt John McMahon, who had joined the unit after a tour with the small A-4-equipped Anti-Submarine Fighter (VSF) community. McMahon would take the honours as the first pilot to eject from a KA-6D when, on 12 August 1971, he and his B/N Lt Cdr Bart Wade were flying overhead the ship at about 1700 hrs in NF 517 (BuNo 152598) while preparing to have the off-going tanker, a VAQ-130 EKA-3B, check their refuelling package. The pilot of the 'Whale' saw flames coming out of the rear fuselage and did not hesitate, immediately keying his mike and yelling '*A-RAB! YOU'RE ON FIRE! EJECT, EJECT!*'

McMahon and Wade looked at each other with a 'who was that and could they mean us?' thought, and then checked the cockpit indications, which were all normal. Elsewhere, other VA-115 Intruders on the same frequency went through the same drill, with at least one B/N reportedly having to be restrained by his pilot from pulling his ejection seat handle. The second call was more succinct; '*A-RAB 517! YOU'RE ON FIRE! EJECT!*' It was at about this point the B/N saw a glow on his side of the fuselage and did indeed pull his ejection handle, leaving McMahon wondering what his right-seater knew that he did not. He duly 'voted Martin-Baker' as well, and was relieved to see the aircraft streaming flames as it headed for the Gulf of Tonkin. Both crew were rescued successfully and soon returned to flight ops.

Reflecting the slower tempo of the war in mid to late 1971, CVW-5 lost only two aircraft and neither due to enemy action. NF 517 would be the only Intruder lost on the 'Arabs' first A-6 cruise, as *Midway* returned home to Alameda in November.

*Enterprise* had re-entered the theatre in June 1971, embarking CVW-14, which had been reunited with VA-196 for this cruise. The 'Main Battery' took the now somewhat-normal assignment of ten A-6As, two A-6Bs and four KA-6Ds with them on deployment.

After five months of operations on the line, the ship hauled out of the South China Sea on 11 December to make a swing through the Indian Ocean and Bay of Bengal in response to the Indo-Pakistani War, where the Nixon administration wanted to exert pressure on India in order to stop the conflict. The presence of 'the world's largest warship' was not lost upon the Indians as, in an article that would be published several years

later in the professional journal *Proceedings*, it was reported that the Indian Navy actually carried out contingency planning aboard its carrier INS *Vikrant* (R 11) on how, if called upon, it would attack the 'BIG E' with its air wing made up of obsolete British-built Hawker Seahawk attack jets. The latter was a 1950s era design roughly equivalent to the Grumman F9F Panther. Needless to say that call never came.

Among the aircrew in the 'Milestone' ready room was West Virginia-native Lt Stephen Coonts, who would later become famed as an author of military novels, and *The Flight of the Intruder* in particular, which drew heavily from his two combat cruises with the 'Main Battery'.

The *Enterprise*/CVW-14 team was back on line off Vietnam on 19 January 1972, and they quickly returned to combat operations. Other than the Indian interlude, the wing had an almost routine cruise, with only two aircraft being lost – an A-7E and RA-5C – both in operational mishaps.

As 1971 continued US Navy aircrew noticed a marked change in the way the North Vietnamese were doing business. Intelligence reports noted that there seemed to be a significant increase in traffic headed down the Trail, and that an offensive might be in the making. In response, both the USAF and US Navy started flying more reconnaissance missions over the north, which directly led to an increase in combat activity in what had been a 'no bomb' zone since mid-1968. And there was a marked difference in how they conducted these events.

As one US Navy F-4 pilot in CVW-9 told the author, 'By mid-1971 the USAF would fly a single RF-4 and an escort Phantom II on their missions over the North. When the "Gomers" shot at them they'd run away, happy with their pictures and put themselves in for Air Medals. We'd fly an RA-5C with what amounted to an Alpha Strike in trail. If one guy opened up on the 'Vigi' with a side arm we'd initiate a "protective reaction" response and roll in with the whole air wing'.

One example of this aggressive philosophy was a CVW-11 'Blue Tree' reconnaissance mission on Quang Lang airfield, in the North, with an RVAH-6 Vigilante in April 1971. Once the North Vietnamese attempted to counter the RA-5C with anti-aircraft fire, the air wing immediately responded with a 'protective reaction' strike that saw numerous hits made on AAA sites, as well as what was officially described as the 'incidental destruction' of a pair of MiG-21s on the airfield. In the view of CVW-11, it was what needed to be done.

In spite of actions like these, increased activity on the Trail, along with more aggressive flying by MiGs and SA-2 activity further south than had been seen before all pointed to another offensive in the making. Between 26 and 30 December the USAF and US Navy conducted Operation *Proud Deep*, which involved the first major strikes against targets in the North in three years. The goal was to hit the growing stocks of war materials apparently being built up in advance of a possible offensive on the South. While *Proud Deep* probably had a positive short-term impact, the political environment would not allow the waging of a sustained campaign. Any doubt as to the intent of the North Vietnamese vanished on 30 March 1972 when six North Vietnamese Army (NVA) divisions invaded the South as a conventional army.

The air war in Vietnam was about to enter another, and final, phase.

# ***SEMPER FI –*** **MARINES FROM** **THE BEACH**

**I**t is no secret that the US Marine Corps proudly bases all of its requirements on support for the infantryman and his rifle. In this regard the Corps wanted an 'all-weather' aircraft for many of the same reasons as the US Navy, although emphasising this capability in the CAS role. It was largely on this basis that the service acquired the A-6.

As of January 1964, the Marine Corps had 12 active attack (VMA) squadrons, all flying the Bravo, Charlie or Echo variant of the A-4 Skyhawk. Over the next several years five of these units would receive the Intruder, while being redesignated as Marine All Weather Attack VMA(AW) squadrons. Four of them would serve in Vietnam. The first of these was VMA-242, an A-4C squadron that was moved without aircraft or personnel to MCAS Cherry Point from Iwakuni, Japan, on 21 October 1964 and subsequently redesignated VMA(AW)-242. The new 'Batmen' trained with VA-42 at Oceana before returning home to North Carolina, where they established the first home for Marine medium attack.

For a while the 'Bats' helped train other Marine A-6 units. However, in late 1966 they deployed to Southeast Asia, arriving at Da Nang, in South Vietnam, on 1 November 1966. Bringing Marine medium attack aviation to the theatre, VMA(AW)-242, led by Lt Col Howard Wolf, joined Marine Aircraft Group Eleven (MAG-11). At that time the group consisted of one Crusader and two Phantom II units, as well as composite reconnaissance/electronic warfare outfit VMCJ-1, which had EF-10Bs, RF-8As and RF-4Bs assigned.

The 'Bats' went right to work using their 'Walnut Hill' radio call-sign, with initial strikes being flown in support of Marines in the northern, I Corps ('Eye Corps') region of South Vietnam as part of Operation *Heavy Hand*. Ordnance delivery could be through their own DIANE system or, increasingly, with the semi-fixed, ground-based TPQ-10 radar, which allowed Marine Air Support Radar Teams (ASRT) to direct strikes in 'all-weather' conditions with a Circular Error Probable (CEP, which is defined as a radius from the target that 50 per cent of the bombs will fall in) of 50 yards or less. By February 1968 the Marines had three TPQ sites active, at Dong Ha, Phu Bai and Khe Sanh. Their 50-mile range allowed radar control of Marine aircraft over most of I Corps.



Another targeting device was the Radar Beacon Forward Air Controller (RABFAC, or just 'Beacon') system which was a six-pound backpack carried by infantry units. Introduced in 1968, the Beacon sent out a signal that could be seen on the A-6's radar. The ground FAC would then tell the crew where to drop their bombs in relation to his position. The system had its issues, including the difficulty that ground spotters had estimating bearing and distance when fighting in jungle terrain. Poor battery life was also a frequent problem. In practice Beacon attacks were allowed within 300 yards of friendlies unless the tactical situation required ordnance to be dropped closer.

The TPQ and Beacon systems would remain the primary means by which the Marines would conduct 'all-weather' CAS in the jungles of Vietnam throughout the war.

With combat operations in full gear, the 'Bats' reported the expenditure of more than 1100 tons of ordnance in their first month of work, including 673 Mk 81 250-lb bombs, 3236 Mk 82 500-lb bombs, 215 Mk 83 1000-lb bombs and 49 World War 2-era M66 2000-lb general purpose (GP) bombs. Over the next several years Marine weapons loads would include 2.75-in rockets, 5-in Zuni rockets, napalm and M117 750-lb bombs, as well as mines.

The M66 and its smaller 1000-lb M55 stablemate were World War 2-era 'high-drag' GP bombs that had been hastily pulled from ammunition dumps when the preferred 'low-drag' Mk 80-series weapons went through a 'bomb shortage' as initial use quickly outstripped supplies. The box-finned GP bombs would be dropped on the enemy for several years.

The AGM-12 Bullpup missile would sporadically show up on ordnance lists through to 1970 too, but the weapon proved unpopular due to the predictable (and flak-drawing) flightpath required while guiding the weapon to impact.

During December, when the winter monsoon was at full tilt, the 'Bats' continued to prove their worth as their 12 aircraft squadron deposited 38 per cent of all ordnance delivered by the nine Marine jet units in-theatre. Missions now included a rising number of flights fragged by the Seventh Air Force, either *Rolling Thunder* or *Tally Ho* (the latter was a sub-set that concerned interdiction missions in the southern part of North Vietnam).

## **MARINES AND SINGLE CONTROL**

The Marines have a long history of using their own air power to support the rifleman on the ground. As early as 1965 in Vietnam their not insignificant capabilities were also noticed by the USAF's Second Air Division (2nd AD), which was officially designated as the 'coordinating authority' for tactical air operations in-theatre. Thus started what became a multi-year battle between the two services as to who should actually



The 'Bats' of VMA(AW)-242 were the first Marine Intruder squadron in Vietnam. DT 12 is shown here in a sandbagged revetment with a load of 12 M117 750-lb bombs. The external tanks suggest that the jet has been fragged for a mission deep into North Vietnam. It was lost on just such a mission on 25 November 1967, when squadron CO Lt Col Lew Abrams and his B/N 1Lt Bob Holdeman were both killed while attacking Kien An airfield near Hanoi (USMC via the Tailhook Association)



VMA(AW)-242's DT 10 (BuNo 152610) was one of the first group of A-6s flown into Vietnam by the squadron. This shot shows it taxiing with five M66 bombs equipped with box fins, these elderly weapons being issued to frontline units in Southeast Asia due to a 'bomb shortage' in the early years of the air war. Their use was largely done by 1969. These older, 'high-drag' bombs could not be suspended from a MER, and therefore had to be hung directly from the parent rack. The extension of the jet's wing spoilers ('pop-ups') in this photograph implies that the crew have just completed their pre take-off checklist. The spoilers would normally deploy on both wings to kill lift when the throttle was at idle and there was weight on the wheels – during an aborted takeoff or during landing, for example. BuNo 152610 would survive Vietnam and later become an A-6E, finally being stricken in 1994 (USMC via the Tailhook Association)

control the Corps' fixed-wing strike aviation in the region.

As of mid-1965 the Marines had a single group and two squadrons of A-4s in-country. This grew rapidly so that only six months later, at the start of 1966, the Corps had two jet bases in Vietnam, with multiple squadrons flying F-4, F-8 and A-4 type aircraft. The November arrival of VMA(AW)-242 in-theatre with its Intruders strengthened Marine Air even more.

The increasing capability of Marine air power was coveted by the USAF to support its operations throughout the region – in particular to provide additional strength for the *Rolling Thunder* campaign, which was being fought a long way from the troops in the field. Not surprisingly, the Corps held fast to its established doctrine, which was that Marine Air was there for one major reason – to support 'Leathernecks' on the ground.

The first round in this argument had ended in July 1965 when the senior US commander in the region, Army Gen William Westmoreland, signed a document that stated that the Marines would determine how many flights they needed on a daily basis to support their troops, and that any 'excess sorties' would then be made available to the USAF. While this victory initially allowed the Marines to retain a large measure of control over their own air units, it certainly did not end the issue.

During 1967 the Seventh Air Force, which had replaced the 2nd AD, began to issue directives within its authority that limited the freedom of Marine Air units from bombing near the DMZ, even when directly supporting troops in contact. This was ostensibly done for 'coordination' reasons.

For its part, the USAF continued to maintain that it was uniquely qualified to control targeting and flight schedules in the region. Its view was that, as per USAF doctrine, hitting supply sources well into North Vietnam would help the ground troops as much, if not more, than CAS. Certain Marine aircraft, like the A-6 Intruder and EF-10B Skyknight, were in particular demand. The not unreasonable USAF point of view was that an aircraft as capable as the Marines' A-6 should not be providing CAS in the South when there were plenty of A-4s and F-100s available. With its unique capability to penetrate high threat areas and deliver bombs accurately in foul weather, the Intruder needed to be an integral part of *Rolling Thunder*, complementing the work of the USAF's own F-105s and F-4s.

The issue of who should control Marine Air continued to churn through 1968, particularly after the joint coordination required to respond to the Tet Offensive and defence of Khe Sanh. Even though, as famously stated by 1st MAW Commander Maj Gen Keith McCutcheon, 'the Marines jealously guards the integrity of its air-ground team', the USAF continued to drive for full control of all strike assets in-theatre.

For the Marines, rapid CAS was both an art form and an act of faith for the 'Grunts' in the field. They quickly developed an effective standing

alert procedure, with four armed aircraft sitting on 'hot pads' at both Da Nang and Chu Lai at all times. These could be from any of the jet squadrons in their groups – A-6s, A-4s, F-8s or F-4s – all of which were flown by Marines who would give everything they had for the infantryman engaged on the ground.

For Marine Intruders the short ranges to most targets meant that 15,000 lbs of internal fuel would still allow more than two hours of flight time, and no need for external tanks. This usually allowed 'max loads' of 28 Mk 81 or Mk 82 bombs, or combinations of bombs with napalm and rockets.

Their intent remained to support the Marines in the I Corps region of South Vietnam, with the goal being to have aircraft airborne within ten minutes of being told to launch. During times of heavy combat the alert aircraft could be moved to an airborne status, orbiting over a local landmark or marker while waiting tasking from a FAC, which made them even more responsive.

The ability of the Marines to quickly support their men in the field was exactly why they insisted they retain control of their own assets. Some Army units stated that the USAF was not as responsive, and the activation of that service's Americal Division in September 1967 in the Marine-heavy I Corps, and their subsequent experience with both Marine and USAF air support, reportedly confirmed that point.

Nonetheless, heavy USAF pressure inevitably led to a 'Single Manager' directive signed by Gen Westmoreland on 7 March 1968, whereby the Seventh Air Force assumed operational direction of all 1st MAF fixed-wing strike missions. With this change, Marine history states that their standard of 18 hours for pre-planned air strike requests became 30 to 50 hours in the USAF system. Immediate CAS requests that had previously gone only to 1st MarDiv level now had to be routed through the USAF's Tactical Air Control Center in Saigon. Needless to say, the Marines considered this arrangement a serious step backwards.

Ironically, Army Gen Westmoreland supposedly ordered implementation of the Single Manager concept with the purpose of giving his service's units the same level of air support as the Marines provided its own. The Corps soon cited numbers which suggested that the opposite was in fact the case, and that the Marines were being asked to accept USAF standards to the detriment of their own troops on the ground.

For Intruders specifically, from mid-1967 the change inevitably meant a substantial increase in missions to work the Ho Chi Minh Trail in Laos and strikes as far north as Hanoi and Haiphong, frequently with VMCJ-1 EW support.

The fight for control of Marine tactical air assets in-theatre ended up being fought out at the Joint Chiefs of Staff level. Emotions between ardent groups of men frequently boiled over – so much so that Gen Westmoreland was quoted as saying that the single manager issue was the one area that had led him to consider resigning during the war. As he stated, 'I was unable to accept that parochial consideration might take precedence over my command responsibilities and prudent use of assigned resources'.

Sanity eventually prevailed, as several USAF and Marine general officers established professional bonds that allowed a mutually agreed change to

a less rigid system. The Marines were still assigned interdiction targets by the Seventh Air Force, but they were also given a certain number of sorties daily to assign as they saw fit, as well as having the ability to swing some missions to CAS if troops in the field required it.

Forty years later US forces still argue over who should control aviation assets in-theatre. Over several subsequent wars the Joint Services have developed complex aviation scheduling and targeting schemes that has smoothed the issue to some degree. Yet within some circles the pithy comment 'Why does the Navy's Army need its own Air Force?' can be heard. As always, the Corps' blunt response remains a hearty, and somewhat defiant, *Semper Fi!*

## **LOSSES**

Returning to frontline flying at unit level, the tempo of operations at Da Nang was frequently frantic, and mishaps did occur. In wet conditions at 0345 hrs on 24 March 1967 Maj Fred Cone commenced his takeoff roll in DT 8 (BuNo 152608), which was fully loaded (16 Mk 82s and six 2.75-in rocket pods). At some point during the jet's acceleration down the darkened runway 35-right, he and his B/N, 29-year-old CWO Doug Wilson, saw a C-141A from the 62nd Military Airlift Wing crossing the runway in front of them. Unable to stop, they hit the USAF transport, which was carrying acetylene tanks among its cargo. The Intruder slashed through the forward part of the Starlifter, killing all five in the cockpit. The loadmaster, seated further aft, would be the only survivor.

The A-6 flipped over and started to burn. Somehow, both Cone and Wilson survived, although the fire lasted until dawn. DT 8 was the first Intruder to be lost by the Marine Corps in Vietnam, albeit to an operational mishap.

On the night of 17 April 1967 VMA(AW)-242 had 12 aircraft on the mission schedule – four of these would be cancelled due to the lack of serviceable jets, but three were 'fragged' under *Rolling Thunder* to strike the same storage and trans-shipment area on the coast just south of Vinh. The A-6s took off from Da Nang at 2235 hrs in one-minute trail formation due to poor weather. Such conditions were perfect for the Intruder, however, with broken clouds reportedly at 700 ft and ten miles of visibility. An overcast at 26,000 ft would prevent moonlight from aiding ground observation of the Intruders.

The lead aircraft, DT 7, was forced to abort during climb-out when its radar failed. The second jet, DT 9 (BuNo 152609), crewed by Maj Jim McGarvey and B/N Capt Jim Carlton, assumed the lead, and they headed up the coast with the remaining wingman, DT 1, manned by Capt K D Hornbacher and CWO Doug Wilson (who was one of the survivors of the C-141 collision). VMCJ-1 EF-10B 'Cottonpicker 69' remained offshore in support of the Intruders.

The flight descended and 'Dash-2' slipped back to take up a one-minute trail position behind lead as briefed. DT 1 approached the coast-in point at 500 ft AGL doing 420 knots. Just prior to the beach they made their final course correction and observed a brilliant orange fireball ahead of them, near the target. The B/N acquired the target and the pilot climbed to 1400 ft AGL, where 20 of the 25 Mk 82s they were carrying came off the racks in a straight path attack. Hornbacher immediately



turned back to the coast while descending to 500 ft, where they stayed until going feet wet at more than 420 knots. It was there that 'Cottonpicker' told them that their lead had not called off target. Attempts to raise their lead on the radio proved fruitless, as did calls to *Red Crown*. The Marine crew subsequently headed back to Da Nang, but not before jettisoning the five remaining bombs. They landed at Da Nang 12 minutes after midnight.

It became apparent that the flash that they had seen was their squadronmates' aircraft hitting the ground, killing both of its occupants. No sign of DT 9, McGarvey or Carlton was ever found, nor any explanation given for their loss. DT 9 was the first aircraft lost in combat by the 'Bats'.

## TWO SQUADRONS IN COUNTRY

Marine Intruder strength in-theatre had doubled on 1 April 1967 with the arrival of Lt Col Williams Brown's VMA(AW)-533. The 'Hawks', another former A-4 unit, had been redesignated 'All Weather' in July 1965 and joined MAG-12 at Chu Lai with an assigned strength of 261 men, which was roughly 25 per cent greater than that required for the Marine A-4 attack units serving in the same group.

Demand from the USAF for use of Marine aircraft did not abate, and on 18 May 1967 VMA(AW)-242 flew its first strikes 'Up North' to Route Package (RP) VI in support of *Rolling Thunder*. The Marines responded to the additional tasking with enthusiasm – many of these would be in the Intruder's preferred 'single ship at night, low and fast' role and usually with VMCJ-1 EF-10Bs providing electronic support.

These missions continued throughout the year, and culminated in a series of strikes that highlighted the ability of the Marines to get the most out of their Intruders. The most significant of these occurred on the night of 25 October 1967 when the two Marine All Weather Attack squadrons conducted a coordinated strike on Phuc Yen airfield, located northwest of Hanoi, with both units flying aircraft more than 200 miles at low altitude before hitting the target. Through the combination of teamwork, superb flying, proper tactics, VMCJ-1's jamming and, perhaps, a bit of luck, they avoided intense AAA and SAM fire and struck their target without loss.

Five days later, however, the Marines lost another Intruder. On this occasion, on the night of 29/30 October, the 'Bats' sent a section of A-6s to mine the Canal des Rapides near Hanoi. DT 1 (BuNo 152601), flown by Capt Hugh Fanning and Steven Kott, had been loaded with 18 mine-fused Mk 82s and a pair of external tanks. It was hit during the attack run and crashed. Neither man survived.



While the US Navy normally used manpower to load bombs, the Marines frequently had the luxury of mechanical equipment. Here, a Marine ordie uses a loader to secure a MER-full of Mk 82 Snakeyes to a VMA(AW)-533 Intruder at Chu Lai, circa 1968 (USMC via Peter Mersky)

VMA(AW)-533 was the second Marine A-6 unit in Vietnam, arriving at Chu Lai on 1 April 1967. The squadron flew combat operations from here through to October 1969, when it moved to Iwakuni. VMA(AW)-533 would return in the spring of 1972, being based at 'The Rose Garden' at Nam Phong through to August 1973. DT 6, shown here, carries the simple markings the squadron used on its first deployment, the aircraft having been photographed just before the unit left CONUS. BuNo 152640 would be converted into an A-6E and lost with VA-75 flying from Oceana on 25 April 1975 (Courtesy of the Tailhook Association)



The month of October also provided the squadron with its first chance to use the Shrike ARM in combat when, on the 27th, an A-6A teamed with a VMCJ-1 EA-6A in a 'Little Partner' mission to identify a 'Fan Song' radar in western North Vietnam and shoot two missiles at it. Future use of the weapon by Marine Intruders was limited, with squadrons continuing to drop significant amounts of 'heavy metal' instead.

On 25 November 'Bats' CO Lt Col Lew Abrams launched from Da Nang at 0330 hrs in DT 12 (BuNo 152612) with his B/N, 1Lt Bob Holdeman, on a *Rolling Thunder* mission, their target being Kien An airfield near Haiphong. They were carrying 18 Mk 82s and a pair of external fuel tanks, and had a VMCJ-1 EA-6A in support. The last radio transmission from the aircraft was that they had begun their attack run. Nothing else was heard from them. It was not until 1993 that DT 12's crash site was found and their remains returned to the US for internment at Arlington National Cemetery.

Abrams would subsequently be awarded a posthumous Navy Cross for the 25 October strike on Phuc Yen. Maj Fred Cone (of the C-141 runway incident) and VMA(AW)-533's Maj Kent Bateman would also receive the medal for the same mission, while their B/Ns were presented with Silver Stars.

On the night of 26 August VMA(AW)-533 lost its first aircraft (BuNo 152639) when Maj Vlad Bacik and Capt Paschal Boggs crashed while attacking a group of buildings near Hon Gai, in North Vietnam. Neither survived.

The previous month, on 7 July, DT 5 (BuNo 152591) had caught fire during 'hot' refuelling at Da Nang. The crew egressed but a plane captain was seriously burned. The airframe was sent home and would be recovered by the Norfolk depot and returned to service, eventually being retired in 1996.

Da Nang was, of course, still largely a USAF base in 1967, along with elements of the 1st Marine Aircraft Wing (MAW) in place. While the 'Leathernecks' endured rather spartan living conditions in comparison to their USAF counterparts, they did have things, like beer, that their US Navy cousins had to do without (at least officially) on their carriers. They did, however, have to deal with things like sapper and artillery attacks. On the night of 15 July 1967 the 'Bat' hangar was hit by a rocket that damaged five aircraft and wounded five men. On the night of 30 January 1968 another mortar strike resulted in one Marine being killed, the destruction of VMA(AW)-242 Intruder BuNo 152588 and four more A-6s damaged.

A following attack on 27 July ended up with another A-6 (BuNo 152595) stricken, and on 23 February 1969 a rocket killed 'Bat' LCpl Tom Stevenson.

Intensive operations continued unabated. In October 1967 alone the 'Hawks' flew 333 combat sorties, 81 per cent of which were at night. They delivered 1558 tons of ordnance on targets throughout the

region. Many missions went deep into the North as solo events, with crews expending their ordnance in classic Intruder fashion.

The 'Hawks' lost their second aircraft on the night of 18 January 1968 when the jet (BuNo 152636) of Maj Hobart Wallace and Capt Pat Murray vanished while hitting a target northwest of Hanoi. No trace of the aircraft was ever found. Although both men were initially declared MIA, much later they were presumed to be KIA.

On 23 February 'Hawks' Intruder BuNo 152631 suffered a night mid-air collision with F-8E DB 00 BuNo 150857 from VMF(AW)-235 while flying just off the coast near Da Nang. Ruled an operational, vice combat, mishap, the Intruder crew (1Lt R V Smith and his B/N) were able to eject and be recovered. The Crusader pilot, Capt Larry Hubler, was killed.

The following night another VMA(AW)-533 jet went down, this time while striking Hoi Lac airfield located about 20 miles northwest of Hanoi. Maj Jerry Marvel and Capt Larry Frieze had flown at low level to the target, dodging SAMs and AAA en route, only to find that their computer would not allow a system delivery, so they performed a manual drop on the runway. They were hit (in BuNo 152644) by a SAM on egress, forcing both men to eject into captivity. Marvel and Frieze each received the Distinguished Flying Cross for their flight, and subsequent Silver Stars for their resistance to their captors whilst PoWs.

On 1 May VMA(AW)-242's Cpts Jim Fickler and G H Christensen were departing on an alert launch with 28 Mk 82 hanging under DT 4 (BuNo 151578) when they experienced control problems almost immediately upon becoming airborne and ejected about five miles from the airfield. Both men were quickly recovered. The following night the 'Hawks' lost an aircraft (BuNo 154164) and its crew to AAA while conducting armed reconnaissance in RP 1 near Dong Hoi. 1Lts Doug Avery and Tom Clem were both killed.

The Marines got a respite from attrition until late July, not losing another aircraft until the 25th, when a VMA(AW)-533 jet (BuNo 154166) was hit by AAA while conducting armed reconnaissance in RP 1. Both crew ejected, with the B/N, 1Lt Paul Brown, breaking his back and only being able to evade until dawn, when he was captured. Brown would initially be recorded as MIA, but was actually made a PoW and returned in 1973. His pilot, Maj Curt Lawson, was separated from his B/N and became the subject of an intense combat SAR evolution the following day. He was eventually recovered by a USAF HH-3 Jolly Green Giant helicopter.

## **MATERIAL HELP**

By late 1968 Marine Corps and US Navy Intruders were starting to gain the benefits of a number of formal Air Frame Changes (AFCs) that were being introduced to the A-6 family after three years of war experience. Among the more significant was the replacement of the type's J-52-P6 engines with the more powerful -P8A variant in 1968. New self-protect



**Of the first 12 A-6As the Marines moved into Da Nang in 1966, seven survived. DT 3 was one of the first to return to CONUS, the bomber being shown here on the ramp at Alameda, California, in February 1968 with a good number of mission markings by the boarding ladder. Veteran BuNo 152603, the 156th Intruder built, would go on to lead a full life, being converted into an A-6E and finally retiring in 1993. The airframe officially ended up on display at the Richmond Municipal Airport in Indiana, although there is also a tail section marked with the same BuNo on display at the Officers' Club at Whidbey Island honouring VA-128 (Courtesy of the Tailhook Association)**

electronic warfare gear, ALR-25 warning receivers and ALQ-100 jammers provided more protection from SAMs and other radar-directed threats. The addition of the DECM equipment was obvious as it included long antennas ('chin-up bars') extending from the outboard wing stations.

Ballistic armour was also fitted in seven locations within the airframe so as to protect vital components, including the engine accessory section, flight control actuators and ECM equipment in the tail. Cockpit armour was also available below the canopy rails and outboard of the rudder pedals. More obvious were flak curtains, which could be mounted in the canopy to provide torso protection against small arms fire. All of these items, and many others, helped keep the Intruder viable in the war zone.

During September, which would prove to be the last full month of operations up north under *Rolling Thunder*, VMA(AW)-242 flew 75 per cent of its missions under Seventh Air Force orders, with the remainder being ground support. The end of the campaign led to more missions to work the Trail in Laos, either under the *Steel Tiger* or *Barrel Roll* titles, as well as additional Intruders available to support troops in the field.

The new year started on a less than positive note when, on 17 January, VMA(AW)-242 Intruder DT 07 (BuNo 152586) went missing while on a night Direct Air Support mission near the A Shau Valley. No wreckage was ever found of the aircraft, which had been working with a USAF FAC when radio contact was lost. The squadron initially reported 37 mm AAA as the probable cause. Capt Jim Fickler and his B/N, 1Lt Robert Kuhlman, were both killed. Fickler, who had just received his 14th Air Medal, had actually been a late replacement on the flight for squadron XO Luther Lono.

A third Marine Intruder unit arrived in-theatre on 5 February 1969 when the 'Vikings' of VMA(AW)-225 joined the 'Bats' as a member of MAG-11 at Da Nang. Yet another former A-4C Skyhawk unit, the 'Vagabonds' had spent three months flying combat from Chu Lai until returning to Cherry Point in September 1965. On 1 June 1966 they were officially redesignated 'All Weather', and they trained as a part of VMA(AW)-533 until finally separated on 22 October with 12 A-6As assigned. On 8 September 1968 the 'new' squadron adopted the 'Vikings' monicker and a new patch designed by Sgt M K Murray, which used a design that obviously drew from the National Football League (NFL) team from Minnesota.

In its first full month in country the 'Vikings' flew 2750 hours in 461 sorties, 285 of which were at night. With *Rolling Thunder* suspended, only six per cent of these were under Seventh Air Force direction, the rest being recorded as being in support of ground units or operations.

The 'Hawks' lost their final aircraft while operating out of Chu Lai on 17 March 1969. 1Lt Steve Armistead and Capt Chuck Finney both went missing with their Intruder (BuNo 154160) while working a target in southern Laos. Other aircraft in the area reported an explosion, and with no parachutes or emergency beacons present they were both listed as MIA, which was later changed to KIA.

VMA(AW)-225 lost its first aircraft on 21 September 1969 while attacking what was referred to as an 'enemy stronghold' near the DMZ. Cloud cover forced the Intruder (BuNo 155611) low in order to make a visual delivery, where it was hit by AAA. Maj P M Busch and B/N 1Lt



R W Hargrave both ejected and were able to evade long enough to be rescued by helicopters. A week later, on 29 September, VMA(AW)-242 squadron XO Maj Luther Lono and 1Lt Pat Curran departed Da Nang (in BuNo 155696) at about 2030 hrs on an *Steel Tiger* armed reconnaissance mission as 'Manual 73', their jet being armed with 22 Mk 82s and a quartet of Mk 20 Rockeyes. Although working with a USAF FAC, they disappeared at some point. Both men perished, their crash site not being located until 1999. This aircraft proved to be the last Intruder lost by the 'Bats' in Southeast Asia.

By mid-1969 the Nixon Administration's 'Vietnamization' policy had taken effect and American units were starting to leave the country for home. The first Marine Intruder unit to go was VMA(AW)-533, which departed Chu Lai on 5 October 1969 for Iwakuni, where it took up residence as the only forward deployed Marine All Weather Attack squadron.

### **DA NANG FINALE**

By January 1970 the Marines' All Weather Attack force had reached its zenith, with six squadrons in the Fleet Marine Force (FMF) and a single training unit (VMAT(AW)-202). Three units (VMA(AW)-121, VMA(AW)-224 and VMA(AW)-332) were based at Cherry Point, as was the RAG, while the remainder were in the Western Pacific at Da Nang (VMA(AW)-242 and VMA(AW)-225) and Iwakuni (VMA(AW)-533). The six fleet units would remain on duty until the first one converted to F/A-18D Hornets in 1989.

The onset of the monsoon in October 1970 induced VMA(AW)-225 to try 'buddy bombing' techniques for CAS. On the 15th 'Viking' Intruders led VMA-311 A-4Es and VMFA-115 F-4Bs on missions where the A-6 was under RABFAC control and the other aircraft dropped on the Intruder's cue. This allowed Skyhawks and Phantom IIs to be used in weather conditions that would have otherwise precluded their ability to conduct visual CAS near troops. Only four days later Da Nang was closed by Typhoon Kate, yet again emphasising the impact tropical weather patterns had on the region.

Very early on the morning of 16 November the 'Vikings' lost their second, and last, aircraft while on a Beacon mission in the I Corps region. After launching from Da Nang at 0430 hrs with 28 Mk 82s, the jet (BuNo 155701) was hit by AAA near the target. With one engine secured, the crew tried to get the stricken Intruder back to Da Nang but were forced to eject just north of the field. 1Lts D R Jessen and R D Tutor were both recovered.

Since the end of bombing in the North on 21 October 1968, Marine aircraft had been spending a lot more time over places like Cambodia and Laos. Intruders were flying many of their missions directly for the Seventh Air Force, with a significant number working the Ho Chi Minh Trail in Laos as part of Operation *Commando Bolt*, which had replaced *Steel Tiger* in 1968. The aircraft's attributes – long endurance, heavy bomb load, two-man crew and a weapons system that included a Moving Target Indicator (MTI) capability – all made it highly desirable for the mission. Indeed, USAF statistics would later indicate that only multi-engined gunships like the AC-119 and AC-130 were more effective in the role.

With fewer flights in ‘high threat’ areas, attrition reduced dramatically. While five aircraft had been lost in 1969, none were shot down in either 1970 or 1971. At the same time American force reductions were in full swing.

After almost 17,000 combat sorties, the ‘Batmen’ left Da Nang in September 1970 for MCAS El Toro, California, where they became the first A-6A squadron attached to the 3rd MAF. They had flown combat in Vietnam for more than 47 months, which made them the longest-serving Marine Attack unit in country during the war. That left VMA(AW)-225, who remained the Marines’ sole Intruder unit in Vietnam for the time being.

In December 1970 VMA(AW)-225 began a field evaluation of laser-guided bombs (LGBs), in this case with 2000-lb GBU-24s being designated from the ground. The first mission was flown on 12 December, with 12 GBU-24s being delivered by the end of the month – just two per cent of the total ordnance they delivered that month, which otherwise consisted of Mk 82 and 83 iron bombs and Mk 20 Rockeyes. A typical aircraft load-out for an LGB mission was listed as a pair of GBUs and six Mk 82s. Later missions would feature USAF target designation from Ubon-based F-4Ds. When the evaluation ended, on 24 January, the unit reported ten of 25 bombs being direct hits, with a CEP of 50 ft.

The ‘Vikings’ remained as the only Marine medium attack squadron in country through to 28 April 1971, when they too departed Da Nang for MCAS El Toro. Their combat legacy was 9661 sorties and more than 51,000 tons of bombs dropped. Upon arrival in California they were almost immediately reduced to paper (‘cadre’) status without men and equipment. The ‘Viking’ flag would finally be secured in June 1972 when the squadron was formally deactivated, not to return until July 1991 as an F/A-18D squadron.

### **‘ELECTRIC INTRUDER’**

From the mid-1950s the Marines’ reconnaissance and Electronic Warfare (EW) capability was found in three Composite squadrons, VMCJ-1, VMCJ-2 and VMCJ-3. One was assigned to each Marine Aircraft Wing and, at the start of the Vietnam War, they were equipped with a mix of photo (RF-8A) and EW (EF-10B) aircraft.

The Douglas EF-10B Skyknight was a late-1940s era nightfighter that the Marines had modified into an EW platform in the mid-1950s as the F3D-2Q. The aircraft had deployed with VMCJ-1 to Vietnam in June 1965 and, although it was doing valiant work, was overdue for retirement. The jet’s replacement would be the EA-6A ‘Electric Intruder’, a dedicated electronic warfare derivative of the A-6A. While one might assume the new aircraft’s pre-1962 designation would have been A2F-1Q, most official paperwork refers to the jet as the A2F-1H for reasons that remain unclear. The first aircraft was flown in April 1963, and 29 would eventually be delivered (all to the Marines) by 1969.

VMCJ-1 introduced the EA-6A to Da Nang in October 1966 and immediately started supplementing its EF-10s, which, due to demand, remained in-theatre until 1969. With little time to acclimate, the ‘Electric Intruder’ went right into the breach, as operations were quick from the start. On the night of 2/3 December 1966 the squadron put an

unprecedented nine jamming aircraft into the air (six EF-10Bs and three EA-6As) to support major US Navy strikes. By January 1967 it had four EA-6As at Da Nang, and they were heavily involved over North Vietnam as the most capable EW platform in-theatre.

For its weapon system the EA-6A was initially equipped with the ALQ-31 pod, a long, odd-looking contraption that contained a pair of ALT-6B jammers. This was soon followed by the ALQ-76 pod, which featured a Ram Air Turbine (RAT) that spun in the air stream to provide power for four transmitters, each of which had an independently steered directional antenna. The system was highly sophisticated for the era, as most jamming systems (such as those carried by the USAF's EB-66B) were omni-directional, transmitting their jamming signal in a 360-degree fashion and not focusing it directionally at the threat radar.

This system allowed the EA-6A to potentially carry up to 20 high-powered directional jammers, giving the aircraft the widest frequency coverage of any electronic attack platform in-theatre. The ALQ-76's basic design set the standard for the later ALQ-99 system used in the EA-6B.

In practice the aircraft carried three ALQ-76s, a pair of fuel tanks and ALE-32 chaff pods on its outboard wing stations. The EA-6A also used an internal VHF-band ALQ-55 communications jammer that could complicate and confuse voice links between North Vietnamese fighter pilots and their ground control intercept (GCI) stations, but only when crews were given permission to use it.

The EA-6A was easily the most capable EW aircraft of the entire war, proving much more capable than the EF-10B it replaced, as well as being much more survivable than the USAF EB-66 or US Navy EKA-3B jammers. Even when the latter service introduced the EA-6B in 1972, the Marines' 'Electric Intruder' still possessed roughly 30 per cent greater frequency range than the Standard-version Prowler, although the latter's developmental plan would take care of that issue in short fashion. The EA-6B's ALQ-99 jamming pods were also capable of generating a significantly higher amount of radiated power than the ALQ-76s carried by the A-model.

VMCJ-1 Intruders flew throughout North Vietnam and well into Laos on *Commando Hunt* missions, providing coverage for strikers working the Ho Chi Minh Trail. Sorties were frequently in support of CTF-77 strikes, providing stand-off jamming for carrier aircraft that did not have sufficient EW support within their own air wings. They also helped



**VMCJ-1 EA-6A RM 1 flies over a cloud deck in 1970 in transit configuration of four external fuel tanks and a pair of ALE-32 chaff pods. BuNo 156988 was the 24th of 29 'Electric Intruders' delivered, and it would be lost on 11 February 1991 after sustaining a rare total hydraulic failure while flying with VAQ-33, forcing both crew to eject (Lt Col Ted Herman USMC Ret)**

**An EA-6A up close and personal. RM 5 formates for photographs directly below a squadronmate in 1970 (Lt Col Ted Herman, USMC Ret)**





Three EA-6As sit on the VMCJ-1 line at Da Nang during the April-May 1971 detachment in-country. Although the unit had returned to Japan in mid-1970, it supplied three different detachments during 1971 to cover Seventh Air Force and US Navy requirements for EW support. The now largely unused aircraft shelters dominate the scene. Each aircraft is configured with three ALQ-76 pods and a pair of external fuel tanks (Lt Col Ted Herman, USMC Ret)

A VMCJ-1 EA-6A spreads its wings at Da Nang prior to a mission over Laos during the squadron's month-long deployment in April-May 1971. External load remains three ALQ-76 pods and a pair of external fuel tanks. The small red kangaroo zaps on the nose and tail would seem to indicate that RM 6 took part in the squadron's det to Sydney, Australia, three months prior to operating from Da Nang (Lt Col Ted Herman, USMC Ret)



USAF and, of course, their own Marine strikes deep into the North, including those by Da Nang- or Chu Lai-based A-6As. Their electronic targets were typically search radars like 'Flat Face' and 'Bar Lock', as well as the SA-2's 'Fan Song', or anti-aircraft radars such as 'Fire Can'. Late in the war the EA-6A's ability to jam up in I-band (over 8 Gigahertz) made it unique among all jamming platforms in Vietnam.

Over the years stories persist that the EA-6A carried ordnance in Vietnam. In particular, there has been much talk about the aircraft shooting AGM-45 Shrike ARMs. However, squadron veterans state that in spite of the jet's ability to launch the weapon, they never actually carried or dropped any form of offensive weaponry over Vietnam. The 'view from above' was that their ALQ-76 jamming pods were too important a capability to dilute with weapons, and that the few EA-6A airframes were too valuable to risk directly duelling with SAM sites.

Not that they did not try, however, as in 1968 a Shrike was loaded and photographed on a VMCJ-1 Intruder at Da Nang. The squadron failed to get permission to fly with the weapon, as 'higher authority' again decided that the jet's criticality as a jamming asset overrode any possible benefit from conducting the *Iron Hand* mission. Much later, Marine Reserve EA-6As would fire the weapon as part of their operational training, but that was well after the conflict in Southeast Asia had come to an end.

Typical of the EW mission, much of what VMCJ-1 did was largely unknown outside classified channels. In late June 1968 the squadron started providing jamming support for US Navy fighters hunting MiGs over the North. In one case the Commander CTF-77 would later state that Marine jamming of GCI radars and communications was critical in the destruction of a MiG-17 by a VF-51 Crusader off the carrier *Bon Homme Richard* on 26 June.



It was not until October 1969 that the last of the EF-10Bs left Vietnam, after which VMCJ-1 stabilised at Da Nang with roughly seven RF-4Bs and 11 EA-6As on strength. By this time the unit's original 'Cottonpicker' call-sign had been 'acquired' by a USAF unit, so VMCJ-1 switched to 'Pigment' instead. With *Rolling Thunder* having ended, EW missions included electronic support measures (ESM) flights over Laos and the Gulf of Tonkin, as well as some strike support into the DMZ. Jamming missions still covered numerous important evolutions, such as US Navy 'Blue Tree' RA-5C reconnaissance flights, USAF 'Buffalo Hunter' drone penetrations of the North and night gunship missions over Laos.

VMCJ-1 was ordered back to Japan in mid 1970 and departed South Vietnam on 5 June, ending five years of continuous combat operations. With its return to Iwakuni, VMCJ-1 resumed something resembling normal peacetime operations, under 1st MAW (Rear). Along with its new routine was the knowledge that the US Navy expected the squadron to keep its EA-6As on a short leash, and available for rapid movement back to Vietnam if the need arose. During this time the squadron swapped out many of its Intruders for newly built airframes, the older aircraft returning to CONUS (Continental United States) to fill out VMCJ-2 at Cherry Point and El Toro-based VMCJ-3.

The call to return came on 19 November 1970 when the squadron was directed to send two of its Intruders to Da Nang. They arrived late on the night of the 20th after a maintenance delay at NAS Cubi Point, in the Philippines, which meant the jets missed participating in the Son Tay prison rescue mission. They did launch on the 21st and joined the rescue force that recovered a USAF *Wild Weasel* crew that had been shot down by a SAM during the raid.

VMCJ-1's next visit would not be until 8 March 1971 when four EA-6As were sent to Da Nang for 11 days to support operations against North Vietnamese forces in Laos. On the 22nd a section of aircraft was called down to help cover the rescue effort of a USAF F-4D crew from the 432nd TRW that had been hit by an SA-2 while escorting an RF-4C. Both crewmen were successfully recovered.

The fourth return trip to Vietnam was launched on 5 April when four aircraft landed at Da Nang for what proved to be a four-week visit,

Cockpit photos of a VMCJ-1 EA-6A pilot (1Lt Ted Herman in the left seat) and EWO (Capt Jack Metrock in the right seat) in 1970. Both men wear large, dual-visor helmet assemblies, the B/N's in a dark tactical colour, Herman's still in training command reflective tape over white. There are almost too many other details to point out here, many of which the 'Electric Intruder' shared with the bomber. Of note is the crumpled radar boot in front of Metrock, which is where the face of the B/N or EWO spent a good amount of its time while on a combat mission (Lt Col Ted Herman, USMC Ret)





**VMCJ-1 sent a four-aircraft detachment back to Vietnam in April-May 1971 in order to cover operations by CTF-77 and the Seventh Air Force. RM 5 (BuNo 156985) is shown here in a shelter at Da Nang between missions. It is loaded with three ALQ-76 pods and a pair of external fuel tanks (Lt Col Ted Herman USMC Ret)**

during which the detachment flew more than 150 missions over the North and Laos. Among the Naval Aviators who flew on these events was 1Lt Ted Herman. He had earned his 'Wings of Gold' in August 1969 and received orders directly to VMCJ-2 in Cherry Point for EA-6A training. Seven months later he was flown to Japan, where he reported to VMCJ-1. Herman recalled;

'The squadron was really talented and the two groups, EW (EA-6A) and recon (RF-4B) got along pretty well together. Along with the NFOs, we still had a core of very experienced senior enlisted men and warrant officers flying as right-seaters. They really knew their business. The transits from Iwakuni

were more than six hours long, with fuel stops at Naha (Okinawa) and Cubi Point.

'The April/May trip included ESM flights that were launched from Da Nang, where we checked out with "Icepick" (the Marine controllers at Marble Mountain) and then ran off up the coast, where we'd report to *Red Crown* (controllers on board a US Navy frigate) for following, before we'd turn due west near the DMZ. From there we'd parallel the Laos/North Vietnamese border up to about Vinh, looking for signals to analyse.

'While on the route we'd be under the eye of the USAF out of Nakhon Phanom. Once on track the EWO would have his head in the boot working the receiver system, calling bearings and other pertinent radar parametrics, which I'd write down while noting the time and location.

'These flights almost became routine, although sometimes you'd be busy – we'd occasionally hear a "Fan Song" for instance. Most of the time you could've read a novel if you wanted. We'd also cover strikes on the trails and observe US Navy A-7s or USAF F-4s dropping bombs, which could be pretty spectacular at night. Nothing came close to watching a B-52 *Arc Light* strike though.

'The return trip was in reverse, and we'd turn in all of our data after landing – which was usually about three to three-and-a-half hours after launch – for intel to evaluate.'

Herman returned with the detachment to Iwakuni and promptly transferred to VT-7 at NAS Meridian, Mississippi, as a TA-4J instructor pilot. He would later fly the AV-8A, AV-8S, OA-4M and eventually command AV-8B-equipped VMA-542 during Operation *Desert Storm* (see *Osprey Combat Aircraft 90 - AV-8B Harrier Units of Operations Desert Shield and Desert Storm*).

VMCJ-1 ended its 1970 detachment to Da Nang on 10 May and headed back to Japan. Like many other Intruder squadrons, however, it too would return.

# CRESCENDO

On 29 March 1972 six NVA divisions invaded South Vietnam and the entire complexion of the war changed yet again. The US Navy had four carriers in-theatre at the time, *Constellation* (CVW-9/VA-165), *Coral Sea* (CVW-15/VMA(AW)-224) and *Kitty Hawk* (CVW-11/VA-52). The fourth ship, '27 Charlie' *Hancock*, with CVW-21 embarked, retained its A-4/F-8 configuration.

With this new, aggressive action by the enemy there was absolutely no doubt that the fight was back on, and a massive escalation was quickly ordered to support the newly re-energised war. The bombing restrictions on the North were immediately lifted and Naval Aviation went to work on a renewed basis throughout the region, hitting targets that they had not seen in almost four years. Operation *Freedom Train* started on 30 March and lasted through to 9 May. During that period US Navy carrier aircraft carried out strike operations throughout North Vietnam as US forces attempted to stem the Communist offensive.

Four more carriers were soon directed to move to the sound of battle, including two Atlantic Fleet ships that were taken from the Sixth Fleet commitment in the Mediterranean. After having gone several years with only two to three carriers assigned to the Seventh Fleet, the US Navy quickly had six and sometimes seven flightdecks assigned to finish the war. Normally, no more than four vessels would be working on the line with CTF-77 at any one time, the others taking short spells of 'R&R' (rest and recuperation) at Cubi Point. Here, carriers were replenished and



'Connie' underway during the 1971-72 timeframe, with CVW-9 onboard. At least eight of VA-165's Intruders are visible. While flight operations are obviously not being conducted, there appears to be a pair of Phantom IIs standing alert on the waist cats. The ship/air wing team was awarded the Presidential Unit Citation following this deployment for their performance and sacrifices (US Navy)



The 'Boomers' made an eight-month deployment to Vietnam in 1971-72 as members of CVW-9 in *Constellation*. It was the squadron's seventh trip to the war zone, five of which were with A-6s. NG 501 is shown here taxiing to the bow cats with a load of Mk 82s and at least one Shrike. Sitting behind on Cat No 3 is 'Showtime 100', the legendary VF-96 F-4J that Randy Cunningham and Willie Driscoll used to make ace, then eject from, on the epic 10 May 1972 mission (US Navy)





**'Boomer' XO Cdr Jim Seely and his B/N, Maj Sid Dodd, with their Intruder on *Constellation* in 1972 (US Navy via Jim Seely)**

**VA-165 A-6A NG 504 approaches a bow cat prior to launching from *Constellation*. The white shirts are making their final checks for condition and security, the green shirts are preparing to hook the Intruder up to the catapult shuttle and a red shirt stands by to pull ordnance pins. While the load is 16 Mk 82s, the bombs on the port wing have standard mechanical nose fuses and the ones to starboard have steel nose plugs for penetration (US Navy)**



squadrons conducted maintenance on their aircraft, while the aircrew caught their breath at the Cubi O'Club or partook of the wonders of nearby Olongapo.

Of the four carriers under Seventh Fleet control that spring, *Constellation* was actually on its way home, having off-loaded most of its ordnance and sent some aircrew back to CONUS. The vessel was at Yokosuka, Japan, for a short port visit before proceeding home to San Diego when the word came to return to Vietnam. Men were recalled, they re-loaded their bombs and CVA-64 re-entered the war in a hurry for what the ship's crew would later call 'Cruise Bravo' as a somewhat sarcastic adjunct to what had been 'Cruise Alpha'.

The 'Boomers' XO at that time was Cdr J M Seely, who was actually on his first tour flying Intruders. Jim Seely had been a career single-seat attack pilot with tours in FJ-4B Furies and combat in A-4s with Atkrons -93 and -152. He had been XO of the latter squadron when it was disestablished in January 1971 after a war cruise aboard USS *Shangri-La* (CVS-38), and was moved laterally to Intruders for a 'bonus' XO tour with VA-165, and initiation into the medium attack business.

As Seely, who would eventually rise to rear admiral and command of the Whidbey Intruder wing, put it, 'Our cruise on "Connie" started in August 1971, and we were on our way home via Yokosuka, loading motorcycles in the hangar bay on 1 April 1972, when the word came down that we were extended indefinitely. We unloaded the motorcycles and headed back to *Yankee Station*.

'Up until April, most of our targets were in Laos and South Vietnam, but we had some action in the North. Besides several protective reaction recon missions, we had spent Christmas to New Year (1971-72) hitting targets around Vinh. The weather was bad and our A-6s had to lead most of the strikes between cloud layers, using our radar to find the targets.

'The April to July part of our cruise was pretty exciting. On 16 April, during an 0300 hrs launch, *Constellation* and *Kitty Hawk* shot off only A-6s – I think there were six or eight in total – to hit SAM sites in RP VI preceding USAF strikes. These were single aeroplane, night, low-level missions, and there was a lot of opposition, especially SAMs. One of our BARCAP F-4s counted 51 missiles and I heard a later count of more than 100, all against our A-6s. Sid [his B/N, Maj Sid Dodd (USAF)] and I had four explode pretty close just before and after bomb release, but fortunately no damage was done.'

## **MARINES UNDERWAY**

*Coral Sea* had arrived in-theatre on 8 December 1971 with a new twist. VMA(AW)-224, normally stationed at MCAS Cherry Point, was attached to CVW-15 and became the first Marine Intruder squadron to deploy on a carrier. The 'Bengals' were initially assigned nine A-6As and a trio of KA-6Ds, making them



the first Marine squadron to operate the tanker variant.

VMA(AW)-224 was another ex-Skyhawk unit. It had flown combat missions in the Douglas jet from Chu Lai in 1966, before being sent back to Cherry Point on 1 November and eventually being redesignated 'All-Weather'.

As the first Marine Intruder squadron to deploy on a carrier, the 'Bengals' had something to prove, yet, as multiple squadron members recall, they had an issue with leadership, particularly with a lack of carrier experience at senior levels. Initial operations did not go smoothly, and things did not

improve as they entered combat. VMA(AW)-224 had arrived in-theatre during the first week of December and made its initial strikes on the 15th. The squadron participated in *Proud Deep* and was quickly involved in *Freedom Train*.

CAG-15, Cdr Tom Dunlop, was lost to a SAM on 6 April in a VA-22 A-7E (BuNo 157590), and his relief was Cdr Roger 'Blinky' Sheets – a fighter pilot who, according to a description given by VF-51 MiG killer Lt Cdr Jerry 'Devil' Houston, was a 'Don Knotts look-a-like, with more guts than a slaughterhouse'. Sheets led from the front and did not shy away from a challenge. He took a quick look at what he had and basically took VMA(AW)-224 over. Never lacking in real talent, particularly at department head and junior officer level, the unit rapidly became a highly effective fighting organisation. Among the ready room 'rabble' was Capt Charlie 'Vulture' Carr. A former enlisted man and warrant officer, Carr was experienced beyond his years, and was regarded as one of the better NFOs in Marine medium attack, if not all of Marine aviation. CAG Sheets picked him for his B/N, and they never looked back.

With the Easter Invasion, the 'good deals' started coming fast for the 'Bengals'. On 9 April the squadron led CVW-15 on a strike on Bai Thuong airfield, with CAG Sheets and 'Vulture' in front. They hit the target hard and returned without loss. That same evening, however, VMA(AW)-224 lost its first aircraft when NL 505 (BuNo 155652), flown by Maj Clyde Smith and 1Lt Scott Ketchie, was hit by AAA while working the Trail over Laos. Their aircraft, loaded with 12 Mk 82s and a dozen Rockeyes, was carrying out a dive-bombing attack when its port wing was hit by flak. The structure failed catastrophically, and while the pilot was able to eject, the fate of his B/N was unknown and his remains were never recovered. Smith managed to evade for four days before being picked up by USAF forces in a dramatic and hotly contested SAR effort.

On 3 May a second 'Bengal' jet went down, NL 501 (BuNo 155709) carrying out a day strike on a bridge near Dong Hoi at the time. 1Lt Joe McDonald and Capt Dave Williams had hit the target and were seen heading feet wet, but they never made the coast-out point. Nothing was



**The 'Bengals' of VMA(AW)-224 were the first Marine A-6 squadron to deploy on a US Navy carrier, spending eight months with CVW-15 in *Coral Sea*. Here, a section of A-models fly over a serene sea with empty MERs and centreline tanks. Both of these aircraft would later be converted into A-6Es. Although NL 502 BuNo 155649 would be lost with VMA(AW)-121 in 1987, NL 501 BuNo 155646 would make it to a retirement in the Arizona desert in 1997 (US Navy)**



**The Marines did not operate the KA-6D from the beach, but they could fly the type when assigned to a carrier air wing. VMA(AW)-224 was the first to use the tanker variant, flying examples off *Coral Sea* during its 1971-72 deployment. NL 514 BuNo 151789 appears to be sitting at Cherry Point with its refuelling hose and drogue extended. With both hydraulic and electric carts hooked up, you might assume that there was an issue with the refuelling system. The airframe would be stricken in 1993 (US Marine Corps)**

ever seen of them again, the exact cause of their loss remaining unknown to this day.

Seventy-two hours later CVW-15 returned in force to Bai Thuong in daylight after intelligence had reported more than 25 MiGs on the airfield. The Intruder division, with each aircraft carrying 16 Rockeyes, came in at 100 ft, while the A-7Es and F-4Bs feinted at medium altitudes. At the front yet again, Carr spotted bandits airborne about ten miles from the target – while they were carrying a single AIM-9 Sidewinder that day, the opportunity would never present itself to use the weapon. CAG

Sheets popped up and rolled onto the airfield, where they flew under a group of surprised MiGs orbiting over the base, who immediately started punching off their external fuel tanks among the ‘Yankee interlopers’.

Bombs delivered, the Intruder division headed for the coast, 50 miles away, as fast and as low as possible. Sheets had noted a single MiG-17 lining up on the third aircraft in their division, and he turned his aircraft to offer it as bait. The MiG obliged, fell in trail and started firing his cannon at them – all this while the Intruder was only about 100 ft above the ground doing more than 450 knots. CAG was able to keep the MiG at bay until CVW-15’s fighters intervened, Lt Cdr ‘Devil’ Houston and his RIO Lt Kevin Moore dispatching the jet with a Sidewinder. All of the A-6s returned to the carrier safely, but not before CAG and ‘Vulture’ carried out a victory roll alongside *Coral Sea*, along with the victorious Phantom II!

On 9 May VMFA(AW)-224 led the wing’s participation in Operation *Pocket Money*, which saw the mining of Haiphong Harbour. The military significance of seeding the North’s leading port city had long been recognised, and advocated, for years. The national command authority had denied all previous requests due to its use by merchant ships from many ‘friendly’ countries, as well as the Soviet Union and China. There was no denying that the sanctuary status granted to the port saw it used to the maximum extent by the North through the importation of their materials of war. That was about to stop.

Charlie Carr headed up the wing mine planning team, and on the morning of 9 May three ‘Bengal’ Intruders, again with CAG Sheets and ‘Vulture’ up front, led six mine-toting A-7Es from Atkrons -22 and -94. At roughly 0900 hrs local time, they roared low over Haiphong Harbour and deposited 36 Mk 52-2 mines into the water in a well planned pattern. At the same time, in Washington, D.C., President Nixon was announcing their work to the world, with the pointed statement that the mines would not activate for 72 hours, thereby giving any shipping in the harbour the option of leaving before they were live. The problem was that the mines littered by CVW-15 had actually been set for 48 hours delay. That small

point did not seem to make a difference as although a few brave ships weighed anchor and departed, most stayed put for the rest of the war.

For several days after 9 May CVW-15 and the other air wings in CTF-77 continued with Operation *Pocket Money*, sewing additional mine fields with Mk 52 and Mk 36 Destructors (Mk 82 bombs with mine fuses) in several other small ports and river mouths. In the end, the campaign achieved its desired goal in that external shipping was all but stopped.

Lt Cdr Phil Schulyer was one of several US Navy officers assigned to VMA(AW)-224 in order to provide carrier experience to the unit. A former S-2 Tracker pilot, he was also known as 'Beer Barrel' within the ready room. Schulyer and his B/N, Capt Lou Ferracane, were hit by AAA during a day strike on the Uong Bi railway marshalling yard on 29 May and were able to get the jet (NL 503 BuNo 155650) over the Tonkin Gulf before having to leave it. They were subsequently recovered by a US Navy HH-3.

Operation *Linebacker* was in full swing when Capts Roger Wilson and Bill Angus were hit while conducting flak suppression near Nam Dinh on 11 June. The aircraft's port wing separated as the pilot tried to pull out of his dive, resulting in the A-6 (NL 522 BuNo 154145) immediately going out of control. Both men ejected, and although Wilson was killed, Angus became a PoW and was released after 291 days in captivity.

During the cruise VMA(AW)-224 also picked up a small number of A-6Bs, and the unit used them to learn the specialised *Iron Hand* mission 'on the fly'. By the end of the cruise the 'Bengals' had fired 47 Standard ARMs, for what they reported to be a 35 per cent kill rate.

*Coral Sea* ended up spending 148 days on the line before heading east for home on 11 July. The ship and air wing had had an intense eight-month deployment, and together they had put in an effort that probably should have qualified them for a Presidential Unit Citation, but they had to settle for the Navy Unit Commendation instead. CVA-43's fighters had shot down five MiGs, and 16 aircraft had been lost, 12 due to enemy action. For VMA(AW)-224's part it was now a battle-tested squadron, having flown more than 2800



The 'Hawk' underway. *Kitty Hawk* makes a turn with a large part of CVW-11, including VA-52, arrayed on deck. Things must not be very busy judging by the number of sailors on the bow, but there still appears to be an F-4 on alert on Cat No 3 (US Navy)

Manning up on *Kitty Hawk* prior to launch during the 1972 deployment. Two VA-52 A-6Bs are present (NH 511 and NH 513), both with AGM-78 Standard ARMs loaded. NH 504 and NH 507 are probably strike aircraft that the *Iron Hand* birds will support. Electrical cables are plugged in and the 'Knightriders' now wait for starting carts ('huffers') to arrive to start their engines (US Navy)







**Cockpit detail of a 'Knightrider' A-6B while on *Kitty Hawk* in 1972. The pilot appears to be saluting the catapult officer to signal that he is ready for launch. Mission marks indicate 20 Standard ARM launches from this airframe - each symbol is adorned with number '2'. VA-52 was one of several squadrons that had adopted grey/white paint on their radomes instead of overall white or natural fibreglass colour by this period (US Navy)**

sorties in combat while introducing two new aircraft, the A-6B and KA-6D, to the Marine Corps. They had proven that, with proper leadership, Marine medium attack was as good on the boat as any in the US Navy.

*Kitty Hawk*, with VA-52 onboard as a member of CVW-11, had arrived on station on 1 March, just in time for the NVA invasion of South Vietnam. The unit's complement of A-6s was typical for

the period – 16 aircraft, made up of nine A-models, three A-6Bs and a quartet of KA-6Ds. Along with the almost daily strike operations flown by the A-models, there were numerous opportunities to excel, including 'STARM Patrols' over the Laotian/North Vietnam border, where single A-6Bs were used to troll for SAM activity. Sometimes the threat was not from the east, as a 'Knightrider' crew had USAF F-4s launch air-to-air missiles at them one day after their aircraft had been erroneously identified as a MiG. Needless to say, words were exchanged.

In another notable incident, a VA-52 crew managed to accidentally launch a Standard ARM towards Seventh Fleet vessels one night from an A-6B. Both men were relieved to find out that none of the force's warships reported any radars missing the following morning.

Other facets spiced up the war for the 'Knightriders' and other ships' crews, particularly since the presence of multiple carriers in the Tonkin Gulf meant that they had to be careful to find the right flightdeck during the day or not blow through another boat's marshal stack full of aircraft circling prior to night recovery. On at least one occasion *Kitty Hawk* aviators reported that their night pattern was close enough to the coast to set off radar warning gear as they awaited their time to push for approach.

The 'Hawk' would spend 192 days on the line before heading back for San Diego on 17 November. Although the air wing lost 13 aircraft (ten in combat), only one was a 'Knightrider', on 19 August when Lt Rog Lester and Lt(jg) Harry Mossman crashed during a night attack near Cam Pha while flying 'Viceroy 502' (BuNo 157018). The pair had been making a low-level strike in an area of heavy thunderstorms, and at some point the aircraft hit the ground – neither crew survived. The location of their crash would not be found until 1999.

Among the ships that had returned in a hurry following the invasion was *Midway*, which had left Alameda early to answer the old 'Hey Rube!' carnival call for help. Only marking its third deployment since the start of the war, the ship and CVW-5 had no idea that it would be almost 11 months before they saw home again.

VA-115 dove right into operations, with the up-beat tempo of battle quickly testing the unit. One of the concerns that had arisen with *Freedom Train* was whether ships, air wings and squadrons could quickly accelerate their efforts back to the pre-1968 levels after several years of slower operations into less stressful areas. In particular, CTF-77 was anxious to see whether its air wings still had the ability to wield 30-40 aircraft Alpha



Strikes against heavily defended targets in the North. In most cases the aircrew performed magnificently, although on occasion the whole affair could turn into a can of worms, as related here by 'Arab' John McMahon;

'In one case we launched an Alpha Strike off *Midway* as planned, rendezvoused successfully but then lost the designated lead aircraft with a mechanical failure en route and had a junior pilot take over in finest US Navy fashion! Then the E-2 called a target switch, which meant a significant change of direction, and the air wing started stringing out. The first aircraft rolled in, only to find a strike from *Hancock* coming off an adjacent target through our formation. Confusion ensued – there was yelling over the radio, aircraft in all directions and bombs going through the formation from above. It was a mess. When we got home the admiral asked where the ordnance had landed. "Hell if we know, Sir" was the only possible response.'

CVW-5 would lose no fewer than 20 aircraft during its 208 days on the line, three of which were Intruders. The first was a KA-6D (BuNo 152597) that suffered an electrical fire in the cockpit's centre console immediately after launch on 2 May. The crew of two, Lts Rick Bendel and Jim Houser, ejected and were quickly recovered.

On the night of 29 October the 'Arabs' suffered the worst landing accident involving an Intruder during the war when Lt Bruce 'Klaw' Kallsen and B/N Lt(jg) Mike Bixel were making what appeared to be a normal night recovery on *Midway*. They had just engaged the No 2 arrestor wire when the jet's right main wheel axle snapped off, leaving a stub main mount that dragged the now disengaged aircraft to the right and into aircraft parked on the bow. Several F-4Bs and A-7As were destroyed or damaged, along with the Intruder (BuNo 155705). Kallsen was rescued from the burning aircraft but B/N Bixel ejected and was not recovered. Four flightdeck crew were killed in the mishap as well.

The 'Arabs' launched a pair of Intruders on the night of 9 January 1973 to provide counter-SAM support for a B-52 near Vinh. The section had briefed that they would attack in a coordinated fashion, but separately, at low altitude. The North Vietnamese launched a barrage of SA-2s in response, as well as a wall of flak. At some point NF 511 (BuNo 155693) was apparently hit and went down. Lt Mike McCormick and Lt(jg) Alan Clark were both killed, becoming the last two Intruder crew to lose their lives during the war.

*Midway's* 327-day 1972-73 cruise was the second longest carrier deployment of the Vietnam War, being just two days short of *Coral Sea's* 329-day epic journey in 1964-65. *Midway* and CVW-5 would subsequently be rewarded with the Presidential Unit Citation for their effort – the fourth, and final, such award presented to a ship/air wing team during the conflict.



**Two 'Arabs' man their KA-6D on *Midway* while 'grapes' (purple shirts) pump it full of fuel. NF 511 (which should be BuNo 151428) carries a standard tanker load of five external fuel tanks, which equated to roughly 4000 US gallons (26,000 lbs) of JP-5 onboard. Most of this was available for transfer through the internal hose-drum refuelling unit. VA-115 introduced the type to WestPac, in 1971 (US Navy)**

## **'THE ROSE GARDEN'**

The North Vietnamese Spring Offensive found the 'Hawks' of VMA(AW)-533 located with MAG-15 at MCAS Iwakuni as the only forward deployed Marine Medium Attack squadron. When the word went out to move units back to Southeast Asia, the 'Hawks' were quickly deployed to a little slice of heaven called Nam Phong. Not wanting to re-occupy Da Nang due to the potential threat of attack by NVA sappers, the Marines were directed to establish a base at Nam Phong RTAFB, which was a remote emergency field located in northern Thailand. Significant improvements were required though, so the US Navy's Seabees went to work, and on 29 April the first Marine aircraft – a KC-130 – landed with the lead elements of MAG-15.

The initial jet squadron, F-4B-equipped VMFA-115, arrived on 16 June, and five days later the 'Hawks' of VMA(AW)-533 flew 12 A-6As in. By early May Nam Phong was home to the Intruders and two Phantom II units, as well as KC-130 tanker and H-46 SAR detachments.

While the location had quickly been turned into a basic jet facility, it was notably lacking in a number of more homely features. In a country where the USAF had provided its airfields with Officers' Clubs, pools and significant amenities, bare-based Nam Phong was said to be a place that only the Marine Corps could love. The location was quickly stuck with the title 'The Rose Garden', based on a popular song back at home, where Lynn Anderson sang the musical question 'I Never Promised You a Rose Garden'. This had also become a tag line for Marine recruiting.

The 'Hawks' went straight to work, with strikes being conducted throughout Vietnam, as well as along the trail regions in Laos and Cambodia. Some flights would launch from Thailand, hit enemy lines of communication and then land at Da Nang for more bombs and fuel, before returning to Thailand. Others would be assigned targets deep into the North, frequently with their co-located KC-130s providing fuel.

Their first loss would occur on 7 July, when A-6A BuNo 155690 of Capt Lenny Robertson and B/N 1Lt Al Kroboth was hit by AAA near the old Marine base at Khe Sanh. With the aircraft on fire, the B/N was able to eject and was quickly captured. Robertson was apparently killed when the jet hit the ground. Initially declared MIA, Kroboth, a 1969 graduate of the Citadel, in South Carolina, suffered multiple bone fractures during the egress and was subsequently forced to endure a nearly three-month-long barefoot march with rapidly deteriorating health north to the 'Hanoi Hilton', where his fellow prisoners helped stabilise and eventually improve his condition. He was repatriated in March 1973.

The 'Hawks' second loss occurred on the night of 11 October when the A-6A (BuNo 155700) of 1Lts Rob Peacock and Marshall Price went missing during an armed reconnaissance mission near Dong Hoi, in North Vietnam. No crash site was ever located for their aircraft. On 27 December VMA(AW)-533 had another Intruder (BuNo 155666) reported missing, and this time it was believed that the jet had crashed near Xuan Noa at night. Once again, no wreckage was found. Capt Jim Chipman and 1Lt Ron Forrester were both listed MIA, which was later changed to KIA.

## RETURN OF THE 'ELECTRIC INTRUDER'

The Spring Offensive of April 1972 also drove the return of the EA-6A to the skies of Vietnam, as the US military needed every available EW asset to support strikes into the North, which was commonly said to have the 'most capable air defence system in the world' at that time. Iwakuni-based VMAQ-1, under Maj John Carlton, began moving all six of its Intruders to Cubi Point, while the unit's RF-4Bs remained in Japan. The first jet arrived on 4 April, with the first combat mission being flown three days later.

Back in North Carolina, Maj Fred Oglive's four-aircraft VM CJ-2 Det 1, which had been working up for a Mediterranean cruise with CVW-3 aboard USS *Saratoga* (CVA-60) was instead ordered to the Philippines to join VM CJ-1 to form a ten-aircraft EA-6A contingent, thereby becoming the largest Marine EW 'squadron' to operate up to that point in history. The first 'Playboys' jet arrived from Cherry Point on 19 April, still wearing its CVW-3 'AC' tail codes, and went straight to work alongside the VM CJ-1 aircraft.

With no Marine infantry to support, the combined VM CJ effort was subordinated to CTF-77 for tasking, and the EA-6As would spend a good deal of their time over the next few months covering US Navy strikes. Missions were typically flown out of Cubi Point to Da Nang, where the jets were refuelled, before heading over the Tonkin Gulf and into North Vietnam. Da Nang would continue to be used as a forward base throughout the remainder of the war, with a reduced number of maintenance troops and aircrew being shuttled into the airfield aboard VMGR-152 Hercules transport aircraft as needed to support the effort.

Along with US Navy EKA-3Bs and EA-6Bs and USAF EB-66s, the Marine 'Electric Intruders' provided EW coverage for strikes throughout North Vietnam during both *Linebackers I* and *II*. Compared to the brand new US Navy Prowlers, which were officially restricted from going 'over the beach' due to concerns with their equipment being compromised, the VM CJ crews flew deep inland – and well within range of their old nemesis, the SA-2 – as they unselfishly provided jamming support for both US Navy and USAF strike aircraft. Complicating the daunting sortie requirement was the temporary loss of one VM CJ-2 airframe after it was struck by a US Navy CT-39 while on the ground at Cubi. Yet the Marines persevered with what they had, and duly provided *more* combat flights than requested.

After years of close contact with SAMs while covering strikes over the North, VM CJ-1 would lose its first Intruder (BuNo 156979) on the night of 12 April when Capt Dave Leet and 1Lt Chuck Christensen went missing after covering a night strike on Hanoi. While some squadron members believe that the jet was hit by an SA-2, other reports state that the last word received from the crew

A 'Boomer' tanker awaits its next customer on what appears to be a great day to go flying. While some KA-3B squadrons painted multiple 'tanker stripes' on their aircraft, Intruder units typically made do with one band, if any. Most were painted in squadron colours – dark green in VA-165's case. NG 514 BuNo 151792 would be stricken from the US Navy in 1991 (US Navy)



was that they were on a return profile and more than 100 miles off the coast, headed for Da Nang. No wreckage or remains were ever located.

A second EA-6A would go down on 29 December when a 'Playboy' aircraft (BuNo 156982) lost all hydraulics on departure from Cubi Point, forcing the crew to eject. The right-seater, MSgt Fred Killebrew, was more than 50 years old at the time, and one of a select group of senior, and very talented, NCOs and warrant officers the Marines still had flying as electronic warfare officers.

With the end of the war the two VMCJ units returned to their respective homes. The combined force had flown almost 2400 combat sorties while providing critical EW support to all three services. For their efforts and sacrifices, the combined EA-6A unit was subsequently awarded a Navy Unit Commendation.

### **LINEBACKER**

On 10 May *Freedom Train* became Operation *Linebacker*, and embarked Intruder squadrons were immediately involved in what became probably the single most dramatic day of the air war.

VA-165 launched early off *Constellation*, and as unit XO Cdr Seely recalled, 'I flew twice on 10 May. In the morning my B/N Sid Dodd and I led six "Boomers" as part of the first Alpha Strike of about 33 aircraft. We were followed by Alphas from *Coral Sea* and *Kitty Hawk* at ten-minute intervals. Our target was a petroleum storage area in Haiphong, and the results were good. We encountered heavy flak and SAMs, and although our division didn't see any MiGs, we knew they had been up and were very active'.

At 1148 hrs on the 10th, 'Connie' turned into the wind and launched its second Alpha Strike of the day. This time the target was a set of bridges located mid-way between Hanoi and Haiphong at Hai Duong. The 'Boomers' were again in the vanguard, and the wing was already abuzz about the reaction the morning strike had had from the North Vietnamese MiG force, which had been encountered in several areas, and with one kill being credited to 'Connie'-based VF-92.

The 32-aeroplane strike approached the target from the south-southeast and initially overflew it after the lead aircraft missed the roll-in point. One of the trailing jets then took control, leading the air wing onto the bridge, which they hit hard. With bombs released, everybody started heading east in a rapid fashion, which is when the radios started filling with MiG calls. For the next 30 minutes CVW-9 fought its way out to the coast in what became the defining air battle of the war for Naval Aviation in that it led to the creation of the first two Phantom II aces of the war. Although targeted by

**Professionals at work. A pair of VA-165 crewmen inspect their weapons – a rack of four Mk 82 500-lb Snakeye bombs – prior to launching from *Constellation* during the 1971-72 deployment. 'Boomer' 'ordies', in red jerseys, stand by to assist as needed. The front portion of the MER is painted in squadron colours (dark green) to keep them from being 'borrowed' by the A-7 units onboard (US Navy via Peter Mersky)**





enemy fighters, SAMs and the occasional burst of AAA, all of the 'Boomer' Intruders returned to the boat.

XO Seely and Maj Dodd flew once more during the day, in a KA-6D that was designated 'wet-wing tanker' for the ship's third major launch of 10 May. Their specific purpose was to refuel any damaged aircraft that were coming feet wet, as well as BARCAP (Barrier Combat Air Patrol) and SARCAP (Search and Rescue Combat Air Patrol) aircraft, thus ending one of the most intense days of the entire air war.

VMA(AW)-224 off *Coral Sea* drew the Haiphong railway marshalling yards as its target that afternoon, this mission coming only a day after the unit had dropped mines off Haiphong Harbour. The 'Bengals' punished their target before flying out under the 'giant furball' of MiGs and F-4s that had developed above them. CAG Sheets and Charlie Carr, leading from the front yet again in NL 500, observed the fight while 'exiting stage right' and escorting a wounded squadronmate in 'Bengal 502'. At one point they witnessed a Phantom II being hit by an SA-2 and then manage to stagger out to sea before its crew ejected. The latter proved to be Lt Randy Cunningham and Lt(jg) Willie Driscoll, the US Navy's first aces from *Constellation's* VF-96.

On 18 May help arrived in the form of the first of two Atlantic Fleet carriers to join the effort, this being veteran cold war warrior *Saratoga*. The vessel had been making almost annual deployments to the Mediterranean since 1957, always with CVW-3 embarked. Plans to return to the Mediterranean were changed on 9 April, the ship departing Norfolk 48 hours later for what would be its first 'hot war' cruise. 'Sara' was the fourth, and last, of the *Forrestal*-class ships to see combat in Southeast Asia, and was still accompanied by CVW-3, also on its first visit to Vietnam. Onboard were the 'Sunday Punchers' of Atkron-75, on their third trip to the war zone. Equipped with a now-standard 'big deck' configuration of F-4/A-7/A-6 strike aircraft, the air wing's EW component was supposed to be a detachment of VMCJ-2 EA-6As, which, as previously stated, was instead sent directly to the war zone to operate with VMCJ-1 out of Cubi Point.

The 'Puncher's' CO was Cdr Everett Foote, with Charlie Earnest as his XO, both Naval Aviators. The squadron's senior NFO was Lt Cdr Grady Jackson, an EW specialist who had previously flown EA-1Fs in Vietnam with the 'Zappers' of VAW-13. His background made him a natural as the lead B/N in the unit, and his experience also meant he would frequently fly the A-6B *Iron Hand* mission and strikes crewed with CAG-3 (A-6 pilot Cdr



*Saratoga* and CVW-3 joined the war in May 1972 with VA-75 onboard. AC 500, the 'CAG bird', is shown here flying what appears to be a LORAN bombing mission, with lead being a USAF F-4D from the Ubon-based 25th TFS/8th TFW. The other Phantom II is a Marine F-4J from VMFA-232, based at 'The Rose Garden' in Thailand. AC 500 would not survive the cruise, as it was shot down on 21 December 1972 (US Navy/Robert L Lawson collection via Angelo Romano)

Lt Cdr Grady Jackson pre-flights a VA-75 A-6B during the 1972 deployment. The aircraft carries both Shrike and Standard ARMs (US Navy via Grady Jackson)



Deke Bordone), as well as both the CO and XO.

Jackson's war ran full the gamut of missions from defence suppression to mine laying and solo, night low-level strikes. On the night of 6 August he and Cdr Charlie Earnest, who had taken over as CO, were preparing to fly a night armed reconnaissance in RP VIB with a full load of Mk 82s and Mk 20 Rockeyes. Word came that A-7A AC 407 (BuNo 153147) from VA-105 had gone down near highway 72 around Vinh Son, and that the pilot, Lt Jim Lloyd, might actually be in a position they could get a helicopter into for recovery.

The decision was made to launch them to take over the on-scene commander role for the planned SAR, and the aircraft quickly had its bomb load reduced to eight Rockeyes and a pair of conical fin Mk 82s. They launched at 2315 hrs, almost two hours after the shoot-down, and went feet-dry after taking about 7000 lbs of fuel from a tanker. The crew worked inland at between 500-1000 ft as they headed towards Lloyd's last known position, with a section of CVW-3 A-7As in high trail for support. They were able to locate Lloyd, bring in the 'Big Mother' rescue HH-3A from HC-7 and direct the Corsair IIs to suppress the rapidly building AAA fire, while also managing to dump their own Rockeyes on a 57 mm site that made the recovery area untenable for the helicopter.

Lloyd was recovered due to the magnificent work of the helicopter crew, and the entire party ran for the coast. Earnest and Jackson were down to 2000 lbs of fuel when they went feet wet, which allowed them about 15 minutes of flight at low altitude. They hit another tanker and recovered aboard *Saratoga* after a 3.8-hour flight. Both crew received the Silver Star for their night's work.

Three months later, on the night of 28 November, Earnest and Jackson were making a night launch from 'Sara' in AC 501 (BuNo 155622) when the Pilot's Horizontal Display (PHD), which had not been secured properly following maintenance, came out of the instrument panel and lodged against the control column. The fully loaded aircraft immediately climbed and quickly stalled. Grady Jackson was able to eject, but Skipper Earnest was unable to leave the aircraft and was killed. Even with the loss of their CO the 'Punchers' continued operations, and flew armed reconnaissance missions the following night to RPs II, III and IV.

VA-75 had suffered its first combat loss on 6 September during a daylight strike on Kien An airfield. A division of Intruders was led by CAG Bordone, and as the crew of 'Flying Ace 505' (BuNo 155626), which was 'Dash-3' in the formation, was preparing to dive on its target the bomber was bracketed by a pair of SA-2s. The aircraft was shredded and the crew ejected. The B/N, Lt Roger Lerseth, broke his leg and was soon captured by a teenage Vietnamese male, who promptly started beating him. He would emerge from a PoW camp in 1973. His pilot, Lt



**A section of VA-75 A-6As in-flight during the 1972 cruise. This aircraft (BuNo 155622/AC 501) would be lost, along with squadron CO Cdr Charlie Earnest, on 28 November 1972 (US Navy via Grady Jackson)**

Cdr Don Lindland, was seen to be moving on the ground and may have avoided capture for hours, but he would not return alive. The 36-year-old native of Oakridge, Oregon, would apparently be killed while evading. His mortal remains were returned to the US in 1983.

The defenders at Kien An claimed another 'Sunday Puncher' on 21

December when 'CAG bird' AC 500 (BuNo 152946) was lost, possibly to AAA. Lt Cdrs Bob Graustein and Bart Wade were both killed. For Wade, this had been a return tour to Vietnam, having made two previous deployments with VA-196. Graustein would subsequently receive a Silver Star posthumously for a 12 October mission over North Vietnam.

Carrier rotation continued. 'Connie' was finally allowed to end its 'Cruise Bravo' and depart for San Diego on 24 June, with the 'Boomers', after spending 169 days on the line in a team effort that would earn the ship and CVW-9 a Presidential Unit Commendation.

The unique 27A/125A-configured USS *Oriskany* (CVA-34) checked in on 21 June with CVW-19 embarked, the air wing boasting its one-of-a-kind 'all-Vought' F-8/A-7 make-up. The vessel was quickly followed by *America*, which arrived in-theatre for its third deployment to Vietnam on 1 July. The ship had CVW-8 embarked this time, which boasted a radically changed line up from its 1970 combat cruise aboard *Shangri-La*. Medium attack was represented by VA-35, which joined an otherwise largely east coast organisation of two F-4J units (one being the Marine Corps' VMFA-333), two A-7C squadrons and the first deployment of the 'station-wagon' version of the Intruder, the new EA-6B Prowler, with Whidbey Island-based VAQ-132 doing the honours (the EA-6B's operational career will be covered in a future volume in the *Osprey Combat Aircraft* series).

The 'Panthers' had a mix of A-models, KA-6Ds and A-6Cs on strength, with the latter jets having by now been modified to illuminate targets for LGBs. This new capability was first used on 5 November, although the TRIM system continued to have severe reliability problems. Indeed, the unit only managed to drop 13 Mk 82 LGBs over four days before returning to more familiar ordnance.

The 'Black Panthers' lost their CO on the night of 16 September when AJ 504 (BuNo 157028) of Cdr Verne Donnelly and Lt Cdr Ken Buell was apparently hit by AAA while attacking targets near Hai Duong. Both men were killed. Following the loss of the Skipper, Cdr Milt Beach took over VA-35.

Operation *Linebacker* ended on 23 October, and both sides went back to the negotiation table in Paris while operations continued over most of the war zone at a slightly reduced pace.

*Enterprise* returned to CTF-77 on 12 September with CVW-14 embarked and the 'Milestones' of Atkron-196 onboard, which gave them the honour of becoming the first Intruder squadron to make five combat deployments to Southeast Asia. Only VA-165 would equal them. The ship relieved 27C *Hancock*, which left six 'flattops' under Seventh Fleet control – five of them carried Intruders.



**The 'Black Panthers' of VA-35 made four deployments to Vietnam, which tied VA-85 for the most out of Oceana. Their final trip was in America as part of CVW-8. AJ 500 is seen here over Virginia prior to deployment. It does not wear special CAG paint befitting its side number, but does carry the classy VA-35 tail markings. BuNo 157014 was converted into an E-model and retired to the desert in 1994 (US Navy/Robert L Lawson collection via Angelo Romano)**

The 'Big E' was the second ship to embark Prowlers, this time in the form of VAQ-131. Without KA-3s onboard, the 'Main Battery' had an increased complement of seven KA-6Ds assigned to carry the largest burden of the tanker requirement for the air wing. During its first month of operations VA-196 had not suffered a loss. That changed on 31 October when KA-6D



BuNo 151806 crashed into Subic Bay due to unknown reasons after taking off from Cubi Point. Lts Chuck Heil and Scott Thomas were both killed.

It was during the 1972-73 cruise that VA-196 experimented with an in-cockpit LGB designator. The Northrop AVQ-27 Laser Target Designation System (LTDS) was a hand-held box manually aimed by the B/N at the target. Although better known for its use by VA-164 TA-4Fs off *Hancock*, VA-196 is believed to have been the only Intruder squadron to have employed the device, which it used to illuminate targets for CVW-14's A-7Es.

## ***LINEBACKER II***

As December came to a close, President Nixon had reached the end of his proverbial rope. The North Vietnamese had grown recalcitrant yet again, and the Commander-in-Chief ordered a 'maximum effort' from the military to push the Communists back to serious negotiations. The result was Operation *Linebacker II*, which, in terms of American air power, would prove to be the penultimate military effort of the war.

On the eve of the conflict's final major event there were six carriers assigned to Seventh Fleet, five of which carried Intruders – *Enterprise* (CVW-14/VA-196), *Saratoga* (CVW-3/VA-75), *Ranger* (CVW-2/VA-145), *Midway* (CVW-5/VA-115) and *America* (CVW-8/VA-35). Only the modified-*Essex* carrier *Oriskany* did not have medium attack represented. From the beach, VMA(AW)-533 continued to work out of Nam Phong, and the combined VMCJ detachments were heavily engaged from the Philippines.

Onboard *Saratoga*, VA-75 had begun its seventh line period on 18 December, and the squadron jumped immediately into what Grady Jackson called 'the most demanding operations conducted in the Southeast Asia conflict'. In CVW-3's case, A-6s pounded North Vietnamese targets as well as other locations in Laos and South Vietnam. On 19 December the squadron flew 12 night strikes around Haiphong, with one aircraft being damaged by AAA. On the 20th AC 510 flew through trees while avoiding a SAM, yet the crew still managed to recover their heavily damaged aircraft back aboard *Saratoga*.

After a Christmas 'day off', which included full alert status, the weather turned foul and VA-75 flew the majority of the strikes from *Saratoga*, many of which were low-level attacks against SAM sites and air defence locations in support of USAF B-52 raids. Daily operations continued through to 7 January, when the last flights were flown.

VA-196's 'Main Battery' nickname was a nod to the days of battleships, and it referred to their role as the primary striking force of the air wing. The unit was also commonly known by its 'Milestone' radio call-sign. VA-196 made five deployments to Vietnam with Intruders, and NK 512 was photographed sitting on the ramp at NAS Lemoore in April 1972 between the unit's fourth and fifth trips – note the navigation publications stuffed in the windscreen's quarter panel by the pilot, which was a common practice throughout the A-6 community. BuNo 155598 would later be converted to both A-6E and KA-6D configurations, prior to being stricken in October 1992 (Clay Jansson courtesy Angelo Romano)



*Ranger* had arrived on 28 November, allowing *Kitty Hawk* to head home on 17 November with VA-52, ending that ship's sixth Vietnam deployment. *Ranger* brought with it a real change in Intruder capability, as VA-145 introduced the AVQ-10A laser designation pod to combat with the US Navy. Designated *Pave Knife*, the system had already seen considerable success with the USAF on a small number of F-4s. The contract to modify the pod for A-6 use had been made over the telephone with Philco-Ford just eight months prior to deployment with VA-145.

Cdr 'Rupe' Owens' 'Swordsmen' were selected to have three A-6As configured for the device (BuNos 155711/NE 503, 155714/NE 504 and 155715/NE 505, respectively), with new wiring being installed, as well as a control panel to the right of the B/N and a new box mounted on top of the glare shield. Along with its laser designator, the system also had a low-light-level TV and a video recorder, which gave the aircraft an unprecedented ability to record bomb damage. Weapons would be 500-, 1000- and 2000-lb Paveway I LGBs.

The squadron conducted a quick Operational Evaluation (OPEVAL) to wring-out the system, which resulted in a CEP on the range of the then unheard of distance of only five feet.

VA-145 deployed with 15 Intruders – seven A-models, two A-6Bs and six KA-6Ds – and they were quickly involved in delivering conventional ordnance as they warmed up in South Vietnam. LGB drops started over the South as well, with the trio of *Pave Knife* aircraft guiding bombs delivered by their own Intruders, as well as A-7Es from VA-25 and VA-113. First strikes in the North were made near Vinh using 2000-lb LGBs. By the end of cruise VA-145 had dropped 54 LGBs and destroyed 14 bridges, among many other targets, while reporting an 80 per cent system success rate overall.

The impact the introduction of true precision weapons had to the Intruder's ultimate legacy cannot be understated, as it signalled the beginning of the end of the use of large numbers of unguided bombs as the air wing's primary strike weapon. The rapidly evolving development of 'one-bomb/one-target' guided weapons would finally reach operational maturity during Operation *Desert Storm* roughly 20 years hence.

On 20 December, during the height of *Linebacker II*, VA-196 XO



As they said, the Intruder was built to fly through the theoretical 50 ft obstacle at the end of the runway. On the night of 19 December 1972, VA-75's Mike Schuster and Jerry Mullins flew AC 510 through a line of trees at night while avoiding an SA-2. In spite of their jet suffering heavy damage (note the refuelling probe, port engine intake lip and wing leading edge), they still managed to recover aboard the carrier *Saratoga*. The aircraft reportedly smelled of pine for weeks to come (US Navy via Grady Jackson)

A division of 'Swordsmen' from VA-145 bomb through the clouds during the 1972 combat deployment in *Ranger* (US Navy/Robert L Lawson collection via Angelo Romano)



Gordon Nakagawa and his B/N Ken Higdon were scheduled for a night strike on Haiphong Harbour, with future author Steven Coonts as their wingman. The XO had serious aircraft problems as he tried to hit his target, being unable to release any ordnance. They were making another pass on the target when their A-6A (BuNo 155594) was hit hard by AAA. Nakagawa and Higdon tried to head out to sea with



their ordnance, 16 500-lb bombs, still under their wings, but the aircraft, now described as a blowtorch, gave up the ghost about three miles from the beach and both men ejected. Although they were able to join up after hitting the ground, Higdon was injured and insisted that the XO try to evade without him. Both were soon captured, however, and became PoWs.

Their A-6 would be the final 'Milestone' jet lost in Vietnam, and on a night when the USAF had six B-52s destroyed. Nakagawa, of Asian descent, would receive 'special attention' from his captors. He would eventually be released and eventually rejoin VA-196 as its CO in July 1974, with now Cdr Lyle Bull as his XO.

*Linebacker II* ended on 29 December, with both sides ready to come back to the negotiation table. As the calendar turned to 1973 there seemed little doubt that the war was reaching its end, but both sides needed two more weeks to come to political terms. Finally, on 15 January, offensive operations against North Vietnam were halted, with a formal ceasefire being announced on the 23rd. Flights continued over the South for four more days, and 'Black Panther' Intruder AJ 507 (BuNo 157007) was shot down by AAA near Quang Tri on the 24th – Lts Cliff 'Spanky' Graf and Steve Hatfield were both recovered. Theirs' was the last A-6 lost in Southeast Asia.

Even with peace at hand, carriers continued to cycle through the Tonkin Gulf. *Constellation* had returned to CTF-77 on 16 January 1973 after a six-month turnaround, with CVW-9 and VA-165 again embarked. As previously mentioned, *Midway*/CVW-5 was finally released on 23 February, and by the time they returned home they had been away for 327 days. Sister-ship *Coral Sea* was back yet again on 20 March after an absurdly short four-month turnaround.

Onboard was the last new Intruder squadron of the war in the form of the 'Green Lizards' of VA-95, the sixth fleet-going medium attack unit based at Whidbey. The 'Lizards' had been established on April Fool's Day 1972, technically as a new squadron, although they carried the title and traditions of a previous Atkron-95, an Alameda-based A-4 unit that had disestablished in 1970. VA-95's deployment turned into what was largely a clean-up operation as they supported Operation *End Sweep*, the mine-clearing effort in North Vietnamese waters that April.

The Marines at Nam Phong would actually continue operations out of 'The Rose Garden' until August 1973, when VMA(AW)-533 was finally sent home to Iwakuni, becoming the last of the *Linebacker II* squadrons to leave the region.

**VA-95 'Green Lizards', established in 1970 at Whidbey Island, was the last new A-6 squadron to deploy to Vietnam (Robert L Lawson collection via Angelo Romano)**

## RECKONING

By 1973 the A-model Intruder was being replaced by a significantly improved version, the A-6E. First ordered in fiscal year 1970, the 'Echo' was the production successor to the A-6A on the Grumman line at Long Island, the aircraft improving on many of the deficiencies that had been identified in the Intruder over years of war.

The 'Black Falcons' of VA-85 received the first fleet E-models at Oceana in December 1971, and would make the initial deployment of the type, with CVW-17 in *Forrestal*, to the Mediterranean only nine months later. Although it did not see combat in Vietnam, the A-6E would be improved throughout the years and remain the heavy hauler of the US Navy/Marine Corps attack force through to the mid 1990s. Many of the surviving A-model airframes would be rebuilt as A-6Es during this period, continue in service and see combat through to the end of Intruder operations in 1996.

So was the Intruder successful in Vietnam? The cost was not insignificant. From 1965 through to the declaration of peace on 27 January 1973, 84 Intruders were lost – 17 percent of total A-6A/EA-6A production. More pointed was the loss of 92 crewmen, with a further 53 becoming PoWs, some spending up to seven years in North Vietnamese prisons before their homecoming. Nonetheless, by the time the air war in Vietnam ended, the A-6 had arguably proven itself to be the most capable and combat proven 'all-weather' strike aircraft in the world.

Adm Jim Seely put the value of the Intruder thusly;

'In my opinion the A-6 was the most effective strike aircraft the US Navy had during the Vietnam War. It could do day missions as well as any other aircraft, and was much superior at night. We had system problems with the A-6A, but it was in fact the only true all-weather aircraft in the fight.'

Vice Adm William F 'Bush' Bringle, one of the Seventh Fleet commanders, acknowledged that the operations required of the A-6 pilots over North Vietnam were among 'the most demanding missions we have ever asked our aircrews to fly'. However, he added, 'there is an abundance of talent, courage and aggressive leadership' in the A-6 squadrons.

Those traits would continue to characterise the US Navy and Marine Corps medium attack communities for another two decades, and through many more intrusions.

The end of the Vietnam War was only the start for the Grumman A-6 family, as it continued to deploy and see combat with the US Navy through to 1996. VA-115 moved with *Midway* and CVW-5 to Japan in 1973, and it took all three PAVE Knife-equipped A-6As with it. NF 505 BuNo 155711 is depicted here with the pod on its centreline in 1974. Introduction of the A-6E TRAM would eliminate the need for this laser designation system (US Navy via Tailhook Association)



# APPENDICES

## APPENDIX A

### INTRUDER SQUADRONS 1965-73

#### US NAVY

Unit	Nickname	call-sign	home	war cruises	combat losses	notes
VA-34	'Blue Blasters'	'Blaster'	Oceana	0	NA	established 1/1/70
VA-35	'Black Panthers'	'Raygun'	Oceana	4	8	converted from A-1
VA-52	'Knight Riders'	'Viceroy'	Whidbey	3	2	converted from A-1
VA-65	'Tigers'	'Cupcake'	Oceana	3	3	converted from A-1
VA-75	'Sunday Punchers'	'Flying Ace'	Oceana	3	8	converted from A-1
VA-85	'Black Falcons'	'Buckeye'	Oceana	4	11	converted from A-1
VA-95	'Green Lizards'	'Lizard'	Whidbey	1	0	established 1/4/72
VA-115	'Arabs'	'Arab'	Whidbey	2	1	see notes
VA-145	'Swordsmen'	'Electron'	Whidbey	3	0	converted from A-1
VA-165	'Boomers'	'Boomerang'	Whidbey	5	2	converted from A-1
VA-176	'Thunderbolts'	'Papoose'	Oceana	0	NA	converted from A-1
VA-196	'Main Battery'	'Milestone'	Whidbey	5	12	converted from A-1

#### Notes

VA-34 – Adopted the traditions and insignia of previous, A-4-equipped, VA-34, which had disestablished in 1969

VA-95 – Adopted the traditions of previous, A-4-equipped, VA-95, which had disestablished in 1970. The new squadron designed a new logo for its use

VA-115 – The 'Arabs' were an A-1 squadron which inactivated in August 1967 and was maintained 'on paper' without aircraft or personnel. They were 'reactivated' on 1 January 1970 for A-6 transition

VA-163 – An A-4 unit 'inactivated' on 1 April 1969 with the intention of eventually returning as an Intruder unit at Whidbey, the 'Saints' were formally disestablished on 1 July 1971

VA-165 – Used 'Firewood' call-sign with A-1s, reportedly used 'Boomerang' and 'Boomer' with Intruders

#### US MARINE CORPS

Unit	Nickname	tailcode	notes	combat losses
VMA(AW)-121	'Green Knights'	VK	conversion from A-4C 2/69	no SEA service
VMA(AW)-224	'Bengals'	WT	conversion from A-4C 11/66	4
VMA(AW)-225	'Vagabonds'/'Vikings'	CE	conversion from A-4C 10/66	2
VMA(AW)-242	'Batmen'	DT	conversion from A-4C 1964	5
VMA(AW)-332	'Polka Dots'	EA	conversion from A-4C 8/68	no SEA service
VMA(AW)-533	'Nighthawks'	ED	conversion from A-4C 1965	11

#### Notes

Marine squadrons were based at Cherry Point, El Toro and Iwakuni. In Vietnam, they were based at Da Nang, Chu Lai and Nam Phong. VMA-121 flew A-4s in Vietnam, but not A-6s

#### RAGS

Unit	Nickname	Base	notes
VA-42	'Green Pawns'	Oceana	converted from A-1
VAH-123	'Professionals'	Whidbey	concurrent with A-3 from 8/66 to 9/67
VA-128	'Golden Intruders'	Whidbey	established 1/9/67 from VAH-123 det
VMA(AW)-202	'Double Eagles'	Cherry Point	established 15/1/68

#### Primary CONUS Bases

Naval Air Station Oceana (Virginia Beach, VA)

Naval Air Station Whidbey Island (Oak Harbor, WA)

Marine Corps Air Station Cherry Point (Havelock, NC)

Marine Corps Air Station El Toro (Santa Ana, CA)



## US NAVY AIRCRAFT CARRIERS THAT OPERATED A-6 INTRUDERS IN VIETNAM 1964-73

Ship	deployments	squadron(s)
USS <i>Midway</i> (CVA-41)	3 (2 with A-6)	VA-115
USS <i>Coral Sea</i> (CVA-43)	7 (4 with A-6)	VA-35, VA-52, VA-95, VMA(AW)-224
USS <i>Forrestal</i> (CVA-59)	1	VA-65
USS <i>Saratoga</i> (CVA-60)	1	VA-75
USS <i>Ranger</i> (CVA-61)	7 (5 with A-6)	VA-145, VA-196
USS <i>Independence</i> (CVA-62)	1	VA-75
USS <i>Kitty Hawk</i> (CVA-63)	6	VA-52, VA-65, VA-75, VA-85
USS <i>Constellation</i> (CVA-64)	7 (6 with A-6)	VA-65, VA-85, VA-165, VA-196
USS <i>Enterprise</i> (CVAN-65)	6 (5 with A-6)	VA-35, VA-145, VA-196
USS <i>America</i> (CVA-66)	3	VA-35, VA-85, VA-165

## APPENDIX B

### INTRUDER BASING

These lists provide the total number of aircraft being reported in operational squadrons at three points during the Vietnam War. The remaining aircraft would typically be found either in depots or at test/developmental locations.

#### 31 January 1966

NAS Oceana	Notes
VA-42 16 A-6A	RAG
VA-35 7 A-6A	
VA-65 11 A-6A	
VA-75 10 A-6A	
VA-85 12 A-6A	embarked USS <i>Kitty Hawk</i> (CVA-63)

#### MCAS Cherry Point

VMA(AW)-242 10 A-6A

#### 31 January 1969

NAS Oceana	
VA-42 23 A-6A, 3 TC-4C	RAG
VA-35 11 A-6A	
VA-65 11 A-6A, 2 A-6B	embarked USS <i>Kitty Hawk</i> (CVA-63)
VA-75 12 A-6A	
VA-85 8 A-6A	

#### NAS Whidbey Island

VA-128 14 A-6A, 3 TC-4C	RAG
VA-52 10 A-6A	embarked USS <i>Coral Sea</i> (CVA-43)
VA-145 12 A-6A	
VA-165 15 A-6A	embarked USS <i>Ranger</i> (CVA-61)
VA-196 10 A-6A	embarked USS <i>Constellation</i> (CVA-64)

#### MCAS Cherry Point

VMA(AW)-224 12 A-6A  
 VMA(AW)-332 11 A-6A  
 VM CJ-2 5 EA-6A, 6 RF-4B

#### MCAS El Toro

VMA(AW)-225 12 A-6A

#### Da Nang

VMA(AW)-24 29 A-6A  
 VM CJ-1 6 EA-6A, 7 EF-10B, 9 RF-4B

#### Chu Lai

VMA(AW)-533 12 A-6A

#### 31 December 1972

NAS Oceana	
VA-42 12 A-6A, 3 A-6E, 2 TC-4C	RAG
VA-34 6 A-6A, 2 A-6B, 2 A-6C	
VA-35 7 A-6A, 3 A-6C, 4 KA-6D	embarked USS <i>America</i> (CVA-66)
VA-65 5 A-6E, 3 A-6B	
VA-75 7 A-6A, 2 A-6B, 5 KA-6D	embarked USS <i>Saratoga</i> (CVA-60)
VA-85 8 A-6E, 4 KA-6D	embarked USS <i>Forrestal</i> (CVA-59)
VA-176 10 A-6A, 2 A-6C	

#### MCAS Cherry Point

VMAT(AW)-202 12 A-6A, 3 TC-4C RAG  
 VMA(AW)-121 10 A-6A  
 VMA(AW)-224 2 A-6A  
 VMA(AW)-332 8 A-6A  
 VM CJ-2 5 EA-6A, 6 RF-4B

#### NAS Whidbey Island

VA-128 21 A-6A, 3 TC-4C RAG  
 VA-52 8 A-6A  
 VA-95 8 A-6A, 2 A-6B, 3 KA-6D  
 VA-115 9 A-6A, 5 KA-6D embarked USS *Midway* (CVA-41)  
 VA-145 7 A-6A, 2 A-6B, 6 KA-6D embarked USS *Ranger* (CVA-61)  
 VA-165 8 A-6A, 2 KA-6D  
 VA-196 7 A-6A, 2 A-6B, 7 KA-6D embarked USS *Enterprise* (CVAN-65)

**MCAS El Toro**

VMA(AW)-242

8 A-6A

VMCJ-3

5 EA-6A, 7 RF-4B

**MCAS Iwakuni**

VMCJ-1

0 EA-6A, 8 RF-4B

**Nam Phong RTAFB**

VMA(AW)-533

10 A-6A

**NAS Cubi Point**

VMCJ-1 Det 101

5 EA-6A

VMCJ-2 Det 1

2 EA-6A

**APPENDIX C****INTRUDER INVENTORY BY YEAR**

	<b>A-6A</b>	<b>A-6B</b>	<b>A-6C</b>	<b>KA-6D</b>	<b>A-6E</b>	<b>EA-6A</b>
1963	8	0	0	0	0	0
1964	48	0	0	0	0	0
1965	86	0	0	0	0	0
1966	117	0	0	0	0	10
1967	180	0	0	0	0	11
1968	233	10	0	0	0	13
1969	290	16	12	0	0	17
1970	310	17	12	8	1	27
1971	282	17	11	43	1	27
1972	261	16	11	51	20	25
1973	214	15	11	57	50	24

**Note** – Numbers reflect total quantity of airframes officially reported on inventory as of 30 June

**COLOUR PLATES****Notes on A-6 Intruder Markings during the Vietnam War**

**Standard Markings** – Gloss Gull Grey over Insignia White. Flight controls (flaps, horizontal tails, rudder) were usually white.

**Noses** – Intruders were initially delivered with highly conspicuous flat-black nose radomes. These were replaced by radomes in natural fibreglass from about mid-1967 and painted radomes (either overall white or even grey and white) once dialectic paint was approved.

**Camouflage** – Two air wings (CVW-11 and CVW-15) experimented with camouflage during the Vietnam War. The experiment proved to be largely unsuccessful, and was suspended by 1967. See profile captions and text for more information.

**Modex (side numbers)** – Most air wings placed their Intruder squadrons in the 500 number series, although there were several notable exceptions where 400 and 800 series were used. Land-based Marine squadrons typically assigned aircraft numbers in single and double digits.

**CAG markings** – Many squadrons designated a single aircraft as a 'CAG bird', with the aircraft being marked for the Commander of the Air Wing and painted in special colours. This aircraft traditionally used the Modex '00', as in 500.

**Crew Names** – Most squadrons placed the names of their Naval Aviators and NFOs under the cockpits on the appropriate sides of the aircraft. These markings were for reasons of tradition only, and did not denote who was actually flying the aircraft, as crews were assigned specific side numbers based on the schedule, mission, load-out and deck-spot.

**1****A-6A BuNo 152600/NG501 of VA-35, USS *Enterprise* (CVAN-65), 1966**

The first of three Vietnam cruises for the 'Black Panthers' was in *Enterprise* in 1966. Unit markings were simple – a black and green stripe on the tail and squadron logo behind the cockpit. NG 501 carries the name of the squadron commander, Cdr Art Barie, on the canopy rail immediately below the ballistic ('flak') curtains. It also wears 120 mission marks beneath the port wing root, and has the black radome that featured on all A-6s through to 1967. The fuselage

speed brakes are still functional, as indicated by their burnt metal finish. The jet's ordnance load consists of 18 Mk 82 Snakeyes, with a pair of external fuel tanks. BuNo 152600 survived the conflict in Southeast Asia and was subsequently converted to A-6E configuration. The veteran bomber was finally stricken on 14 June 2002.

## 2

### **A-6A BuNo 152902/NL 500 of VA-35, USS *Coral Sea* (CVA-43), 1969**

VA-35 adopted their classic "Black Panther on a disk" markings during their second combat deployment with CVW-9 in *Enterprise* in 1968. Variations of this motif would be used by the squadron until it was finally disestablished in 1995. NL 500, from the squadron's third deployment, shows a 'Battle E' award behind the canopy and very subtle CAG markings in the form of a Commodore's pennant adorned with the number '15' on the rudder. This aircraft ended up as part of 'Intruder Reef' – a collection of A-6s dumped off Jacksonville, Florida – in 1995.

## 3

### **A-6C BuNo 155660/AJ 511 of VA-35, USS *America* (CVA-66), 1972**

VA-35 was the third squadron to deploy with A-6Cs during the war, three examples being included in a mixed complement of A-, B- and KA-6D models during the 1972 cruise in *America*. The C-model typically carried a smaller bomb load than the A-6A due to the 3000-lb penalty induced by the sensor package fitted to the belly of the jet. AJ 511 carries the type's semi-permanent TRIM pod on the centreline, along with six Mk 82 500 pounders on the outboard pylons and external fuel tanks on the inner stations. BuNo 155660 would end up as an A-6E, and it was lost in an accident at MCAS Yuma on 18 October 1983 while flying with VMA(AW)-242.

## 4

### **A-6A BuNo 154133/NL 401 of VA-52, USS *Coral Sea* (CVA-43), 1968**

The 'Knightriders' received Intruders in 1967 and made their first deployment straight into combat in 1968. The squadron used a slightly different form of its knight's head on each of its three cruises to Southeast Asia, although they always used the red anti-collision light as the knight's 'eyes'. NL 401 is armed with a pair of Mk 84 2000-lb bombs carried on the parent rack, with clean internal pylons and a centreline fuel tank. BuNo 154133 was later converted into a KA-6D and finally stricken in October 1992.

## 5

### **A-6A BuNo 151817/NL 407 of VA-65, USS *Constellation* (CVA-64), 1966**

Atrkon-65 was the third Intruder squadron in-theatre, and it made the first of its three trips to Vietnam as a member of CVW-15 in *Constellation* in 1966. The squadron was one of two equipped with Intruders that experimented with camouflage during this period,

although NL 407 shows normal colours, including a thin orange stripe on the fin tip and a squadron logo behind the cockpit. Weapons shown here are 18 Mk 82 Snakeyes, and the internal wing stations are devoid of any stores. This airframe was lost near Cherry Point with VMA(AW)-224 on 18 April 1968, killing both aircrew.

## 6

### **A-6A BuNo 152904/AA 504 of VA-65, USS *Forrestal* (CVA-66), 1967**

The 'Tigers' second war cruise with Intruders was the ill-fated 1967 *Forrestal* deployment, which ended after only five days on the line off Vietnam. It was also CVW-17's first deployment, and where that wing's stylised 'double-Alpha' tail markings were introduced. AA 504 carries them, along with a green lightning bolt in 500-series squadron colours. The aircraft is loaded with three racks of Mk 82 Snakeyes and single four-round LAU-10 Zuni rocket pods on the inboard pylons (obscured by the Mk 82s). While AA 504 survived the *Forrestal* conflagration, it was subsequently lost on 15 August 1990 while flying with the Naval Air Test Center.

## 7

### **A-6A BuNo 151592/AG 504 of VA-75, USS *Independence* (CVA-62), 1965**

The 'Sunday Punchers' introduced the Intruder into combat in 1965 with relatively simple markings, including the original black nose and 'burnt metal' fuselage speed brakes. AG 504 also wears an early version of the 'Tonkin Gulf Yacht Club' patch under its port wing root, and carries what was almost a signature load for the type – multiple Mk 82 500-lb bombs mounted on MERs. The Intruder typically carried six bombs on its outboard wing stations and five on the inboards, as shown here, with the forward/inner MER shackle left empty on both sides so as not to interfere with the forward gear doors. BuNo 151592 completed its service career with VA-42, after which it was sent to the Aircraft Maintenance and Regeneration Center (AMARC) at Davis-Monthan AFB, Nevada.

## 8

### **A-6B BuNo 151559/NH 520 of VA-75, USS *Kitty Hawk* (CVA-63), 1967**

The 'Punchers' flew a mixed bag of 11 A-6As and three A-6Bs during their 1967 deployment in *Kitty Hawk*. NH 520 represents one of their 'Bravos', loaded with a pair of AGM-45 Shrike anti-radiation missiles on the outboard wing stations and AGM-78 Standards on the inboards. BuNo 151559 was lost after a wing slat failure following launch from *Enterprise* on 30 July 1972. Both crewmen were recovered.

## 9

### **A-6A BuNo 152946/AC 500 of VA-75, USS *Saratoga* (CVA-60), 1972**

The aircraft numbered '00' in a squadron is

traditionally 'assigned' to the Commander of the Air Wing, or CAG, and usually carries his name on the side of the canopy. In this case, CAG 3, Cdr Deke Bordone, is so honoured. Marking an aircraft with the CAG's name was done for the sake of tradition, and it did not infer that the machine was flown only by the CAG, who, like all other aircrew, would be assigned an aircraft for a flight based on mission, load-out and deck spot. Many of these aircraft also carried enhanced markings as 'CAG Birds', frequently in a rainbow effect, as shown on this VA-75 Intruder, which has had its rudder painted in the officially sanctioned order of red/yellow/green/orange/dark blue. AC 500 is configured as a tanker as well, with a D-704 buddy store on the centreline station and four 300 gallon external fuel tanks. BuNo 152946 did not survive the cruise on *Saratoga*; being lost on 21 December 1972 during a night strike on Kien An airfield, with both aircrew being killed.

## 10

### **A-6A BuNo 151792/NH 813 of VA-85, USS *Kitty Hawk* (CVA-63), 1965**

CVW-11 and CVW-15 both experimented with camouflaged aircraft during their 1965-66 deployments. A number of Intruders from the units were involved, using various patterns of dark and medium green, tan and dark blue. While they were judged to be fairly effective in keeping aerial threats from seeing the aircraft from above, it was a general consensus that dark paint actually made them more visible from the ground, which was the source of their primary threat. The scheme also made them harder to see on the flightdeck at night. These issues brought an abrupt end to the experiment. No two aircraft seemed to be exactly alike, with VA-85's NH 813 featuring a scheme that was very similar to the USAF's 'SEA' paint of two-tone green and tan over standard white undersides. The jet served for a period with VA-42 upon its return to Oceana, before reverting to the standard grey and white scheme. Eventually converted into a KA-6D, BuNo 151792 was stricken in October 1991.

## 11

### **A-6A BuNo 151785/NH 805 of VA-85, USS *Kitty Hawk* (CVA-63), 1965**

VA-85 made four trips to Vietnam from Oceana – the most of any of the east coast Intruder units. Its first two deployments were in San Diego-based *Kitty Hawk* with CVW-11. For the 1965 trip the unit flew a mix of camouflaged and grey/white aircraft. The standard paint scheme included a yellow rudder with six small 'Black Falcons' stencilled onto it. However, the unit's high loss rate in-theatre led to a wide variation in markings as replacement aircraft were taken aboard. The aircraft's unusual bomb load – nine Mk 82s on three TERs – may have been influenced by the 'bomb shortage' during this period. BuNo 151785 was one of no fewer than seven Intruders lost by the squadron on this deployment, the jet being flown into the water off

Vinh on 22 April 1966 during an *Iron Hand* mission. Both crewmen were killed. The name on the side of the aircraft is Lt(jg) Brian Westin, who was awarded the Navy Cross for his actions during this deployment.

## 12

### **A-6A BuNo 151591/NH 502 of VA-85, USS *Kitty Hawk* (CVA-63), 1966**

VA-85's second cruise in *Kitty Hawk* featured a change in markings, now applied in dark green as specified for 500-series squadrons. NH 502 is configured for a short-range *Iron Hand* mission, with four AGM-45 Shrike missiles and six Mk 82 Snakeyes on the centreline. BuNo 151591 would eventually be modified to A-6E status and finally report for storage in AMARC in July 1996.

## 13

### **A-6B BuNo 151561/AE 521 of VA-85, USS *America* (CVA-66), 1968**

The only trip the 'Buckeyes' made to Vietnam on an Atlantic Fleet carrier was with *America* in 1968. The squadron adopted the standardised CVW-6 markings of a rudder painted in squadron colours (green in this case), adorned with six small stars. AE 521 was a 'Mod 0/1' A-6B, and it is shown here with a single AGM-78 Standard ARM. BuNo 151561 was almost certainly lost (along with its crew) to an SA-2 on 28 August 1968.

## 14

### **A-6A BuNo 152954/NL 504 of VA-95, USS *Coral Sea* (CVA-43), 1973**

The 'Green Lizards' made their only appearance off Vietnam with Intruders in March 1973, covering the immediate post-combat phase and Operation *End Sweep*. Markings included the 'fins' applied to the rudder, as well as the pitchfork on the tail. NL 504 carries a buddy store on the centreline, external fuel tanks on the outboard pylons and empty MERs inboard. This airframe would also become an A-6E and eventually report to AMARC in September 1994.

## 15

### **KA-6D BuNo 152598/NF 517 of VA-115, USS *Midway* (CVA-41), 1971**

The 'Arabs' of VA-115 introduced the KA-6D to Vietnam in 1971 on their first Intruder deployment. As of September that year the squadron had ten bombers and four KA-6Ds assigned, its tankers sharing the air wing's refuelling duties with VAQ-130 Det 2's quartet of EKA-3Bs and buddy-store equipped A-7Bs. NF 517 would be the first of its type lost when it suffered an in-flight fuel leak that led to a fire and ejection by its crew on 12 August 1971.

## 16

### **A-6A BuNo 152606/NG 500 of VA-145, USS *Enterprise* (CVAN-65), 1969**

Another 'CAG bird', NG 500 is marked up for CAG-2 during VA-145's initial Intruder deployment. It is seen



here laden down with 22 Mk 82 Snakeyes and a fuel tank on the centreline. Eventually modified into a KA-6D, BuNo 152606 was stricken from US Navy lists in April 1992.

## 17

### **A-6A BuNo 155678/NE 506 of VA-145, USS *Ranger* (CVA-61), 1970**

For their second deployment the 'Swordsmen' used three horizontal sword blades on their vertical tails. NE 506 carries 12 Mk 82s and a pair of fuel tanks. This aircraft would be converted into an A-6E and be stricken in February 1994.

## 18

### **A-6A BuNo 155714/NE 504 of VA-145, USS *Ranger* (CVA-61), 1972**

The 'Swordsmen' had three A-6As modified in 1971 to carry the AVQ-10A *Pave Knife* laser designation pod, which they used to great success with Paveway I bombs over Vietnam. NE 504 also wears the squadron's colourful broadsword motif on the tail, which became the unit's standard marking for many years. The pilot's name under the canopy is Lt Cdr John J Juan, who was not actually qualified for *Pave Knife* delivery and rarely, if ever, flew 'his' aeroplane. Another future A-6E, BuNo 155714 would survive until February 1994, when it was stricken.

## 19

### **A-6A BuNo 152930/NE 511 of VA-165, USS *Ranger* (CVA-61), 1967**

VA-165's first Intruder cruise was in *Ranger* with CVW-2. NE 511 carries a light load of 16 Mk 82 bombs (four on each MER) and an empty rack on the centreline. This airframe was stricken in February 1994.

## 20

### **A-6A BuNo 155683 NG 502 of VA-165 USS *Constellation* (CVA-64), 1972**

The 'Boomers' marked their aircraft with a boomerang through their entire time in Intruders. NG 502 is from their 1972 deployment and carries four Mk 20 Rocketeers on the outer stations and five Mk 82s on the inboards, with a fuel tank on the centreline. The squadron XO's name, Cdr Jim Seely, is painted below the canopy rail. BuNo 155683 would later become an A-6E and be stricken in August 1996.

## 21

### **A-6A BuNo 155608/NE 506 of VA-196, USS *Ranger* (CVA-61), 1969**

VA-196 made five deployments to Vietnam with Intruders, in addition to a pair with A-1 Skyraiders. Its A-6 markings remained remarkably stable throughout the conflict, the unit applying a simple orange stripe on the tail and some form of squadron insignia behind the cockpit. NE 506's bomb load is made up of nine Mk 83 1000 pounders, three per MER. BuNo 155608 was lost while serving with VMA(AW)-121 on 2 October 1983 when the wing separated from the aircraft during a

dive-bombing run at 29 Palms, in California. The crew were killed in the ensuing crash.

## 22

### **KA-6D BuNo 151821/NK 514 of VA-196, USS *Enterprise* (CVAN-65), 1972**

When CVW-14 deployed aboard CVAN-65 in 1972 it did not have any EKA-3B tankers assigned due to the presence of VAQ-131's EA-6Bs. The 'Main Battery' therefore had to pick up the majority of the air wing's refuelling load, with seven KA-6Ds being reported onboard as of December among the unit's complement of 18 Intruders. They were supplemented by buddy-store equipped A-7Es and A-6As. NK 514 is typically configured for this cruise, with five external fuel tanks. It also boasts a 'tanker stripe' around the fuselage to help with airborne identification. BuNo 151821 would subsequently be lost with VA-145 on 5 November 1980 due to control and hydraulic problems.

## 23

### **A-6A BuNo 155661/NL 511 of VMA(AW)-224, USS *Coral Sea* (CVA-43), 1972**

The 'Bengals' were not only the first Marine Intruder squadron to operate off a US Navy carrier during the Vietnam War, they were also the first Marine unit to fly both the A-6B and KA-6D. On 9 May 1972 the squadron led CVW-15 in Operation *Pocket Money*, which saw the mining of Haiphong Harbour. Three aircraft carried four Mk 52 mines each, as seen here. BuNo 155661 was subsequently modified into an A-6E and served nobly until dumped off Jacksonville, Florida, in 1995 during the forming of one of two Intruder artificial reefs.

## 24

### **A-6A BuNo 155615/CE 06 of VMA(AW)-225, Da Nang, 1969**

VMA(AW)-225 was the third Marine Intruder squadron in-country, arriving at Da Nang in February 1969. Missions in support of troops in the I Corps region of South Vietnam were frequently close enough to the two Marine bases to allow heavy bomb loads to be carried without the need for external fuel. This 'Viking' jet carries a maximum bomb load of 28 Mk 82 Snakeyes on five MERs. The inboard wing stations carry five apiece, with the forward/inner MER shackle being kept empty due to potential conflict with the forward gear doors. BuNo 155615 later became an A-6E, and it was stricken in March 1996.

## 25

### **A-6A BuNo 152934/DT 10 of VMA(AW)-242, Da Nang, 1967**

Periodic bomb shortages during the early years of operations in Vietnam would occasionally lead to the use of World War 2 and Korean War era high-drag/box-fin bombs, like these M66 2000 pounders. The 'Bats' marked up this batch as 'Easter Eggs' in honour of the spring holiday. BuNo 152934 would eventually be converted into a KA-6D, and it was lost while

serving with VA-75 on 12 July 1984 due to possible control failure. Both crew were recovered.

## 26

### A-6A BuNo 155685/DT 1 of VMA(AW)-242, Da Nang, 1970

Another Marine Intruder displays a heavy bomb load with no external fuel tanks, indicating CAS tasking relatively near to Da Nang. The aircraft carries five MERs, with four Mk 20 Rockeyes on the centreline, five Mk 82s on the inboard wings (forward two with fuse extenders) and six Mk 82s on the outboard wings, the forward three with fuse extenders. Later modified into an A-6E, BuNo 155685 was stricken in July 1994.

## 27

### A-6A 154167/ED 10 of VMA(AW)-533, Chu Lai, 1968

The 'Hawks' were the second Marine Intruder squadron in-country, and the only one based at Chu Lai. Their markings were simple, consisting of the silhouette of a diving hawk on the rudder. ED 10 carries empty MERs on the centreline and outboard pylons and external fuel tanks on the inboard wing stations. BuNo 154167 would eventually be modified into an A-6E and was later selected to represent the Intruder family by being placed on display at the National Air and Space Museum's Steven F Udvar-Hazy Center in Virginia.

## 28

### A-6A BuNo 155706/ED 4 of VMA(AW)-533, Nam Phong RTAFB, 1972

The 'Hawks' returned to Southeast Asia in 1972 in response to the NVA's spring invasion of the south.

Instead of being based in Vietnam, they joined MAG-15 at 'The Rose Garden', a bare base near Nam Phong, Thailand. ED 4 is loaded with six Mk 82 bombs on the centreline, external fuel tanks on the inboard wings and TERs loaded with three four-round LAU-10 Zuni launchers on the outboard stations. BuNo 155706 was converted into an A-6E and stricken in March 1994.

## 29

### EA-6A BuNo 156985/RM 34 of VMCJ-1, Da Nang, 1968

VMCJ-1 introduced the EA-6A into combat in 1966, the type eventually replacing all of the squadron's venerable EF-10Bs by 1969. The composite unit also flew photo-reconnaissance missions with RF-8As and, later, RF-4Bs. RM 34 carries a pair of ALQ-76 jamming pods and two 300 gallon external fuel tanks. BuNo 156985 was eventually converted to EA-6A 'RECAP' standards, and it flew with VAQ-209 for a number of years before being stricken in January 1988.

## 30

### EA-6A BuNo 156991/AC 610 of VMCJ-2, NAS Cubi Point, 1972

The 'Playboys' of VMCJ-2 provided carrier detachments for two Mediterranean cruises in 1971 and were preparing for a deployment in *Saratoga* a year later when they were called to provide a detachment to augment VMCJ-1 out of Cubi Point to counter the 1972 'Easter Offensive'. The detachment made a transpacific crossing to the Philippines and went into combat still wearing CVW-7 markings. The load-out on this aircraft is three ALQ-76 jamming pods and a pair of 300 gallon external fuel tanks.

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The iconic role in Vietnam for the Grumman A-6 Intruder was as a single-ship, very low-altitude night striker. On the night of 30 October 1967 Naval Aviator Lt Cdr Charlie Hunter and his Bombardier/Navigator (B/N) Lt Lyle Bull launched in a single A-6A from USS *Constellation* (CVA-64) and conducted a textbook perfect attack on the previously untouched Red River ferry docks located near downtown Hanoi. Their VA-196 Intruder, BuNo 152618, was loaded with 13 Mk 83 1000-lb Snakeye bombs on five Multiple Ejector Racks (MERs). The ferry site had only recently come off the 'restricted target' list, and Carrier Air Wing Fourteen's first attempt to hit it with a large Alpha Strike had failed to have significant effects due to intense defences, which included, according to Lyle Bull, '20 SA-2 surface-to-air missile sites and exactly 597 AAA emplacements'!

After slipping feet dry north of Vinh, the crew flew northwesterly below parallel karsts to mask their approach. Bull had his head down in the radar boot interpreting the returns to mark their path while Hunter deftly controlled the aircraft as they approached the target. They became 'unmasked' about 20 miles from the docks and were immediately targeted by anti-aircraft artillery (AAA) fire. SAMs were next – at one time four were seen to be in the air and obviously following them below 500 ft. 'Intelligence reported that the SA-2 couldn't track below 1500 ft. We were disturbed to see that their assessment was incorrect', the B/N would later say.

Hunter manoeuvred the aircraft in a high-speed barrel roll that confused the SAMs enough for them to miss their target and then took the aircraft down as low as 50 ft as they approached the docks, all this while enemy fire continued unabated. They delivered their ordnance and returned safely to the carrier.

Both men subsequently received the Navy Cross for their night's work, becoming the first of five US Navy A-6 crews to receive the award for action in flight. Hunter and Bull would both subsequently rise to the rank of rear admiral (Cover artwork by Gareth Hector)

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